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July/August 2006 \$3.95

*A publication of the University of Illinois at Springfield*

## *RENEWAL*

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A large flock of birds is seen in flight against a bright orange and yellow sunset sky. The sun is a glowing orb on the right side of the horizon. In the foreground, there are dark silhouettes of bare trees and a body of water reflecting the sunset light.

*Disturbed land can return  
to its natural state and we can learn  
from the transformation*



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turning the basement into a seasonal canning operation and, at least once, slaughtering dinner out by the alley.

Unbelievable as it seems now, the neighbors appeared to see nothing odd in this. Maybe that was because, in the years right after the Second World War, the neighbors weren't that far off the farm themselves. The exodus from the country was well under way.



dict to its source. His conclusion is that, abetted by a global industrial food "system," we have grown so distant from the sources of our food we have lost our ability to make informed choices. We have become unthinking, irresponsible eaters — irresponsible to ourselves, to other animals and to the earth itself. Pollan is at his best in describing how we got to this point and





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**2006 Roster**  
of State Government Officials

Peggy Boyer Long



## It's dinner time. Do you know where your food came from?

by Peggy Boyer Long

**M**y grandmother could kill half a dozen chickens in a matter of minutes.

Bessie Revelle Dragoo had the strong arms of an Illinois farm woman, the ample waist of a good cook and the unsentimental manner that comes from being an old hand at getting the main course to the table.

She could grab a hen by the head with one hand, swing the bird aloft in a wide arc, slam it onto a stump and bring an ax down with the other hand.

I saw this just once, and that's how I remember it: deft and swift. I wasn't supposed to see that much. My mother wanted to spare her citified daughter and so sent me to take a nap. But that life-and-death drama took place in my own back yard in Decatur. It would have been hard to miss.

When the city couldn't go to the farm, my grandmother brought the farm to the city. She helped my mother by turning the basement into a seasonal canning operation and, at least once, slaughtering dinner out by the alley.

Unbelievable as it seems now, the neighbors appeared to see nothing odd in this. Maybe that was because, in the years right after the Second World War, the neighbors weren't that far off the farm themselves. The exodus from the country was well under way.

The farm was beginning to change, too. So was the food we ate and the way we prepared it.

By the time I came along, hog butchering was a distant memory on our farm, and nobody — my mother would stretch this word for effect — noooooobody had to learn how to milk the cow anymore. When I entered high school, all that was left in the way of domestic stock was an occupying force of evil-minded "settin'" hens. They were owned by the family that has, by now, sharecropped our ground outside Camargo and lived in great-great-grandfather's old farmhouse as many generations as my ancestors had.

But even those too-intense laying hens — good for a joke on naive city cousins — had disappeared by the time I headed to college.

It no longer paid to keep animals on the farm. It was cheaper and easier

to go the store, then the drive-through. Meanwhile, the land had become a monoculture, a rotation of corn and beans.

In three generations and five decades, we moved from my grandmother's fried chicken to Chicken McNuggets. The industrial food marketers call this progress. Most folks don't know the difference. And some folks don't want to know the difference.

This is the central point of author and journalist Michael Pollan's latest book, *The Omnivore's Dilemma: A Natural History of Four Meals*. As humans, we can choose what to eat. But with choice comes danger — the possibility that our food can make us sick as easily as it can sustain us and give us pleasure. Is that mushroom edible, or poisonous? It's important to know.

Our survival, Pollan stresses, still depends on knowing what, exactly, we're eating, so he tracks the American diet to its source. His conclusion is that, abetted by a global industrial food "system," we have grown so distant from the sources of our food we have lost our ability to make informed choices. We have become unthinking, irresponsible eaters — irresponsible to ourselves, to other animals and to the earth itself. Pollan is at his best in describing how we got to this point and

Photograph by Bethany Carson





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what the consequences might be. As for how we might think about the food we eat — and find new choices we might want to make — he is, admittedly, as confused as the rest of us. He does offer parameters for those choices, lay out some alternatives and suggest a few compromises.

First, Pollan argues that making informed choices means facing squarely the costs of a monoculture agriculture — the costs to the land and to those who farm it, the costs to our social culture and the costs to our health. His description of the disease risks inherent in large-scale meat, egg and dairy animal operations is, to say the least, unappetizing, and he's sympathetic to those who have chosen to "turn away." A small bite will suffice: "The industrial animal factory offers a nightmarish glimpse of what capitalism is capable of in the absence of any moral or regulatory constraint whatsoever."

Pollan's descriptions of feedlots and killing floors, hog confinement and

mass egg production make my grandmother's methods of dispatching animals seem enlightened. Those she raised weren't force-fed corn; they retained their beaks; they roamed at will. Then they died cleanly at the hands of the family they would sustain. Not, let's be clear, that my grandmother ever gave two seconds' worth of thought to the moral implications of the life or death of a chicken.

But an increasing number of us do. Bethany Carson's piece in this issue shows that more of us are looking for food that is organic, locally grown and humanely raised. So many, in fact, that demand is outstripping supply.

Illinois farmers, she reports, have been "slow to cash in." But if enough of them do, and enough consumers decide it's time to relearn where their food comes from, it's likely the relationship of grower to processor to consumer will change again. □

Peggy Boyer Long can be reached at [peggyboy@aol.com](mailto:peggyboy@aol.com).

## Oil to food Belly up to a barrel

We might want to think of the Middle East instead of the Middle West next time we drive past a field of corn. The gas we pump into the SUV before hitting the road should make us think twice, but so should that corn, argues author Michael Pollan.

"We seldom focus on farming's role in global warming, but as much as a third of all the greenhouse gases that human activity has added to the atmosphere can be attributed to the saw and the plow," he writes in *The Omnivore's Dilemma*, his critique of America's industrial food system. "For example, if the sixteen million acres now being used to grow corn to feed cows in the United States became well-managed pasture, that would remove fourteen billion pounds of carbon from the atmosphere, the equivalent of taking four million cars off the road."

Pollan's point is not anti-farming, and certainly not anti-farmer. His argument is that we don't need as much corn as U.S. farmers grow — and that American agriculture is costly in ways most of us don't stop to calculate.

Farmers, struggling to meet the dictates of a stratified industrial food market, plant corn fenceline to fenceline because that's what manufacturers want. And, because somebody has to consume it, manufacturers keep finding ways to put more of it into what we eat.

Meanwhile, the national food industry that has evolved in the past 50 years sucks up a lot of no-longer-so-cheap oil. According to Pollan, "one-fifth of America's petroleum consumption goes to producing and transporting our food."

We consume more energy than we produce, he writes. "From the standpoint of industrial efficiency, it's too bad we can't simply drink the petroleum directly, because there's a lot less energy in a bushel of corn (measured in calories) than there is in the half gallon or so of oil required to produce it."

Peggy Boyer Long

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Bethany Carson



## **What goes around comes around so our daily habits drive the state's economy**

by Bethany Carson

**W**orrying about the environment seems rather trendy these days.

That's not to demean former Vice President Al Gore's new global warming film, *An Inconvenient Truth*, nor is it to belittle increasing awareness of global warming. But the reality is that we often don't start caring about an issue until we learn how it relates to our checkbooks or, worse, our health.

Between doctor's visits and high energy bills, consumers are starting to care. By now, many know that coal-fired power plants release mercury, which falls into rivers and lakes, combines with bacteria to form methylmercury and accumulates in fish. Eating the contaminated fish poses a risk of developing learning disabilities and neurological problems.

Yet we don't know how to wean ourselves from environmentally unfriendly energy sources.

We also know that gas-guzzling cars create a demand for oil and contribute to air pollution that seeps back into our lungs and puts us at risk of developing asthma, heart disease or cancer.

But we continue to pay the \$40 to \$50 it costs to run our cars so we can get to work and to grandma's house.

We consider ourselves aware because we know about the problems. But, in this case, knowledge hasn't necessarily brought power. We all know there's no

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***What we eat, drive and throw away has an impact on the environment, which has an impact on our health, then our wallets. Eventually, our daily habits have an impact on the state's economy.***

magic pill or life-size bubble that can shield us from environmental hazards. So we sit and wonder when, and how, the government will relieve us from these threats to our health and income.

That's part of the problem. It's too easy to dismiss the challenge as a federal or state policy issue. It's far more difficult to figure out what we, as individuals, can do about it.

In reality, what we eat, drive and throw away has an impact on the environment, which has an impact on our health, then our wallets. Eventually, our daily habits have an impact the state's economy.

The price tag includes the public cost of preventive care, including access to routine checkups. If we do get sick,

the state helps foot the bill for our treatment in emergency rooms, hospitals or long-term care facilities.

There's a social cost, too: decreased productivity, increased unemployment and more demand for governmental assistance. And, of course, there's the cost of implementing regulations to change our behavior. In essence, our tax dollars are being used to protect us from self-inflicted vulnerabilities.

The Catch-22 is that what we do and consume drives the state's economy. For instance, our demand for heating and lighting benefits the state's coffers.

The more energy we use, the more money is generated through the state's electricity excise tax. Electric suppliers pass the tax on to residential customers by tacking it onto their electric bills. In fiscal year 2005, that tax revenue totaled \$348 million for the state's general fund, according to the state's Commission on Government Forecasting and Accountability. That's down from \$351 million in fiscal year 2000, but up \$55 million from a decade ago.

One environmental group argues state policy sets a bad precedent because it encourages more energy production and consumption. A 2003 report by the Illinois Public Interest Research Group says, "The mantra for energy policy over the years might read, 'More is better. The more energy we're using,



the better our economy is doing.”

The environmental consequence is air and water pollution. The U.S. Environmental Protection Agency's Toxics Release Inventory for 2004, the latest available, says electric utilities reported 67 percent of all air emissions of mercury in 2004. Those emissions increased by more than 4,200 pounds, from about 90,330 pounds in 2003 to 94,600 pounds in 2004.

In Illinois, we draw nearly half of our energy from coal-fired power plants and less than 1 percent from renewable energy sources.

The state's 21 coal plants emit 71 percent of the state's mercury emissions, according to Jim Ross, manager of the Division of Air Pollution Control at the Illinois EPA. He filed testimony as part of a June hearing held by the Illinois Pollution Control Board regarding Gov. Rod Blagojevich's proposal to tighten standards and limit mercury emissions.

Deborah Rice, who studies how exposure to environmental chemicals affects the nervous system, also filed testimony as an independent expert for the Illinois EPA. A toxicologist at the Maine Center for Disease Control and Prevention, she said exposure to the hazardous form of mercury — called methylmercury — can cause deficits in attention, language, memory and muscle coordination.

Health problems associated with exposure to methylmercury include a lower IQ, which has implications for the economy in terms of lost wages and increased dependency on welfare, among other social consequences, she said in her testimony.

Marie Tipsord, an attorney with the Illinois Pollution Control Board, says the panel received about 6,000 comments in response to the governor's proposal. The plan is intended to reduce mercury emissions from Illinois coal-fired power plants by 90 percent before mid-2009, a stricter regulation than the federal government's standards. The 2005 Clean Air Mercury Rule is designed to reduce mercury emissions by 70 percent when implemented.

If the the governor's idea wins approval, then the state could pay about \$33 million more a year in control costs,

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***Energy efficiency is the most cost-effective way of reducing cancer-causing carbon emissions, and it's a necessary step for lowering our energy demand.***

according to Ezra Hausman, senior associate with the research and consulting firm Synapse Energy Economics Inc. In his testimony, Hausman said the estimated price tag reflects the power companies' cost to retrofit and operate the new mercury controls.

“It does not translate directly into electricity prices and costs to consumers,” he said. He estimated the annual cost to consumers as a whole at up to \$11 million. But, he added, each ton of mercury emissions removed from the air would save in health care costs.

Hausman cited a 2005 report by the Northeast States for Coordinated Air Use Management that shows the country could save about \$182 million to \$194.5 million per ton of mercury removed each year. Over 10 years, savings could amount to billions of dollars.

The Illinois Public Interest Research Group agrees that spending now could save later.

Rebecca Stanfield, state director of the research group's environmental program, Environment Illinois, says energy efficiency is the most cost-effective way to reduce cancer-causing carbon emissions, and it's a necessary step for lowering our energy demand. “It can displace a lot of the more polluting and increasingly expensive sources of power that we rely on,” she says.

The state, for instance, saved about \$4 million between November and April just by setting a standard temperature for operating and nonoperating hours in state-owned and -leased buildings, says Donald Barnes, energy manager for

Central Management Services.

That \$4 million helped offset the anticipated \$20 million increase in natural gas bills, he says.

But it's actually the residential sector that has the greatest potential for more efficient lighting and water heating, according to the Chicago-based Environmental Law and Policy Center. Its *Repowering the Midwest* report says Chicago-area residents who swap conventional incandescent lights with compact fluorescent lamps could save about \$50 in electricity costs over the life of the lamp.

Other energy-efficient appliances are available in Illinois. The center gave an example: Lake Zurich's Osram Sylvania, which manufactures efficient lighting.

Environment Illinois hopes the state will join others in enforcing energy efficiency standards for residential buildings, Stanfield says. If businesses and homes used the most energy-efficient appliances, they could save about \$1.7 billion between 2005 and 2030, according to the 2003 report by Illinois Public Interest Research Group, the Illinois PIRG Education Fund, the Appliance Standards Awareness Project and the American Council for an Energy-Efficient Economy.

“This is money right now that's going out of state to pay for imported natural gas from the Gulf or from Canada,” Stanfield says. “Keeping that \$1.7 billion in the state would be a big economic boost to the state's economy.”

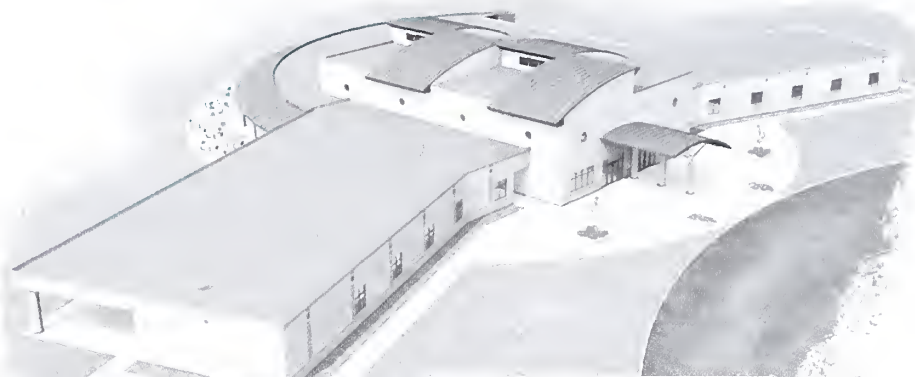
While she says consumers can use their purchasing power to choose efficient ceiling fans, refrigerators, air conditioners and set-top boxes for digital cable, to name a few instances, our instinct, unfortunately, is right in some regards — the long-term solution does need to come from policymakers.

Until the state figures out how to encourage us to be energy efficient, drive fuel-efficient cars or take mass transit, we all foot the bill to protect the environment and ourselves from our self-inflicted cycle: consume, pollute, get sick, pay; consume, pollute, get sick, pay. □

Bethany Carson can be reached at [capitolbureau@aol.com](mailto:capitolbureau@aol.com).

# BRIEFLY

*Drawing courtesy of the Illinois Department of Natural Resources*



*This rendering depicts the Events Center, which is now built and ready to open this month. The new attraction is expected to draw thousands to the state.*

## OUTDOOR SPORTS

### Gun enthusiasts can show off skills at a new venue

**S**outhern Illinois will get thousands of visitors this month when the new World Shooting & Recreational Complex in Sparta hosts two opening events. A larger national competition is scheduled for August.

"It's definitely a boon for our area," says Rep. Dan Reitz, whose district encompasses the new tourist attraction. The Steeleville Democrat guided the legislation that appropriated \$29 million in fiscal year 2005 to fund the project. Additional funds have been spent on roads and other infrastructure.

The FY 2007 operating budget for the Illinois Department of Natural Resources was increased \$16.5 million over this past year's budget, with money set aside to hire 10 employees to open and staff the recreational complex.

"The economic development that will spin off from this will be good for southwestern Illinois and for all of southern Illinois. And it will also prove to be a good investment for the state."

As many as 20,000 people a day, including 7,000 shooters, are expected for the Grand American World Trapshooting Championships August 8-18. The Amateur Trapshooting Association moved this annual event

from its previous home in Ohio, which reported income of \$14 million, says Corey Rheinecker, spokesman for the city of Sparta. The Randolph County site will host several events, a schedule that will run nearly year round. Two national chains have motels under construction, and Reitz says he expects other private developers to build restaurants, shopping outlets and more motels.

The 1,600-acre complex includes a 36,000-square-foot exhibition center with a restaurant, a vendor mall and a maintenance/ammunition building, all of which will support gun enthusiasts and skeet shooters from across the country. There are 120 trap fields extending 3.5 miles, two 15-station sporting clay courses, a Cowboy Action Shooting corral, an ATV demonstration area and a championship 3-D archery course.

The recreational area also houses the largest camping facility in the state with 746 full-service (water, electricity, sewer) campsites and 264 with water and electricity — 340 of them will be roomier, premium sites on the lake. A former coal mine, the area has three deep-water lakes that were stocked with sport fish two decades ago as part of reclamation

efforts. Future plans call for boat docks and accessible footpaths.

Taking care of all the visitors will provide jobs for as many as 500 locals, says Rheinecker. Area schools agreed to push back the start of the academic year to allow high schoolers to work the events. Several high schools have skeet shooting teams that will have access to the facility.

The complex will open July 6-9 with a new trapshooting event, the inaugural U.S. Open, which is expected to attract 2,000 shooters. After the August championship event, the area will be available to the general public as a state park.

*Beverley Scobell*

*Photograph courtesy of the Illinois Department of Natural Resources*



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## Lawmakers form new Environmental Caucus

Environmental advocates could get a better hearing in the next legislative session. They have more than two dozen sets of ears to bend because lawmakers from both parties and both chambers formed the state's first Environmental Caucus.

Rep. Karen May, a Highland Park Democrat, says that as one of 15 Illinois lawmakers who belong to the National Caucus of Environmental Legislators, she has become more aware of the connection between the environment and public health. "That really created a monster in me," she says.

That monster led her to spearhead a two-year effort to require that mercury-containing switches be removed from cars' brakes or trunk lights before the vehicles are processed into scrap metal. Gov. Rod Blagojevich signed the measure.

Toxins also are Rep. Elaine Nekritz's pet peeve. The Northbrook Democrat is focused on possible causes of autism. Between three to six of every 1,000 children have a form of autism and, Nekritz says, some parents are starting to point to chemicals beyond mercury.

"These chemicals are pervasive in our environment, and we really don't know what they are doing to us," she says.

"There's no [Food and Drug Administration] for these kinds of products."

Nekritz considers the state's role a big question. Banning the chemicals one by one doesn't seem legitimate, she says, but the state could apply pressure on the feds. She wants to establish a national review process.

"We do this with prescription drugs, and chemicals can have every bit as much impact on our health," she says.

Meanwhile, her measure to reduce excessive idling of trucks was signed by the governor. Those that weigh more than 8,000 pounds and use diesel fuel wouldn't be allowed to idle for more than 10 minutes each hour. The first-time fine of \$50 would triple if drivers were caught a second time within a year.

While one of the roles of the Environmental Caucus will be to highlight the need for change, Rep. Dave Winters says, "We also need to be respectful of the needs of businesses and workers to keep a viable economy."

The Shirland Republican doubles as a part-time farmer who raises 250 acres of crops, half of which are planted in corn and beans. He uses the rest of his acreage to raise prairie grass for feedstock. Some of that grass is shipped to Iowa, where it

is being tested as a possible source of electricity.

In addition to taking a closer look at reducing environmental damage stemming from coal mining, Winters says his agenda next session could include reviving a plan to encourage consumers to buy more fuel-efficient cars. He says he might revise the measure to reduce the sales tax on fuel-efficient cars sold to Illinois residents while increasing the tax for inefficient cars. "It's revenue-neutral for the state," he says.

Sen. Jacqueline Collins, a Chicago Democrat, would like policymakers to understand the potential for wind farms. She notes the federal government halted new wind farm projects across the nation, including all in Illinois, to study whether they interfere with military radar related to homeland security.

"If they're not willing to do it on a federal level, I think states need to begin to move on the issue," Collins says. "We need to look at alternative energy sources — as well as how do we conserve and produce renewable forms of energy that not only benefit the environment but also benefit our citizens."

*Bethany Carson*

## GEOLOGY

### Scientists to drill in Antarctic for signs of global warming

Described as a "global thermostat," Antarctica is a harsh environment that holds secrets in its undisturbed ice. By drilling core samples in various places around the continent, scientists, led by a team from Northern Illinois University in DeKalb, hope to be able to foretell the earth's climate future by studying its past.

Ross Powell, an NIU geology professor, is co-leader with David Harwood of the University of Nebraska at Lincoln of the United States contingent of ANDRILL, an international geologic project that will include at least half a dozen NIU scientists and students. The \$20 million project is funded by the National Science Foundation, which usually allocates just \$400,000 for the Antarctic Geology and Geophysics Program.

The ANDRILL team over the next two drilling seasons will take sediment cores for periods going back 20 million years.

They will begin work on the Ross Ice Shelf, off the coast and in the shadow of Mount Erebus, a 12,500-foot active volcano. Volcanic ash in the sediment will provide chemical signatures that can be dated. Remains of microscopic marine life will provide information on a number of factors, including ancient water temperatures.

NIU helped lead the first drilling effort on the continent, which is one and a half times the size of the United States and is covered almost completely by ice measuring up to 3 miles thick. Much of what scientists know about Antarctica began with those explorations in the 1970s.

Among the findings:

- The ice sheet, which is divided into east and west lobes, is more than 35 million years old.
- Through most of its history, the continent was ice-free.

- Should it melt entirely, the level of the world's oceans would rise nearly 200 feet.

A buildup in greenhouse gases in the atmosphere is the chief reason for a projected warming of between 2.5 and 10.5 degrees Fahrenheit by 2100, according to the United Nations' Intergovernmental Panel on Climate Change. When global temperatures warm past critical thresholds, the ice sheet melts, accelerating the warming effect.

In past research, NIU geologist Reed Scherer found from studies of fossil diatoms — microscopic single-celled algae that live in surface or shallow waters — that the West Antarctic Ice Sheet melted during a warm period about 400,000 years ago. Today, such an event would raise sea levels by 18 feet, covering most of Florida and New York's Manhattan Island.

*Beverly Scobell*

## BRIEFLY

### Protecting open space strikes a chord with lawmakers from all areas

Illinois lawmakers joined forces again this spring to protect the special state fund designated for land acquisition. At the same time, they called for increasing spending from that fund by more than \$10 million for the fiscal year that started July 1.

The fund was established to help local communities preserve land, build parks and protect wildlife. This spring marked the third consecutive year Democratic Rep. Karen May of Highland Park had to gather support for the Open Space Land Acquisition and Development fund.

May says protecting open space from urban development strikes a chord with lawmakers from all areas of the state. Constituents rank parks and recreation as important to their quality of life as schools and health care.

"We can't build on every postage stamp of land," says May, who lives in Lake County, which encompasses miles of Lake Michigan shoreline.

The state has lost 90 percent of its 8 million acres of original wetlands, according to Northern Illinois University's Regional Development

Institute. Wetlands can help control floods, reduce erosion and recharge groundwater. The institute says about 918,000 acres, or 2.6 percent of Illinois' original open land, remains.

Each year, the fund dedicated to open-space projects generates about \$36 million in new revenue from a real estate transfer tax. State comptroller records show the fund hasn't spent the entire amount allotted. In addition, dollars remain in the fund if projects aren't completed by the end of each fiscal year. For the past three years, the money dedicated to projects has been increased from \$73.8 million to \$80.5 million.

That's why the state has been able to take so-called surplus money from the fund to use for general state purposes, says Becky Carroll, spokeswoman for the governor's budget office. She says the fund transfers have not put open space projects at a disadvantage.

"We could give them \$100 million in appropriations, but if you look at the history, they're not spending what's appropriated."

This fiscal year, the budget office plans to tap \$159 million from other special funds,

vation 2000, a natural resource program that's normally funded through the state's general revenue fund.

"It's not a 120 percent victory, but it's a compromise," May says.

The other provision in the compromise is designed to help ease the burden on local agencies that budget for the open space projects.

Peter Murphy, general counsel for the Illinois Association of Park Districts, says local agencies have had to cover 100

percent of projects then seek 50 percent reimbursement from the state. That can put communities in a severe financial bind because they often have to borrow the state's portion and wait to get reimbursed.

The Department of Natural Resources is considering a variety of ways to ease the burden on local agencies by restructuring the way they get reimbursed from the state, according to Marcelyn Love, spokeswoman for the agency.

Local districts also could benefit from an increase in the state grants, allowing communities to cover the cost of acquisition. Murphy

says the grant amount hasn't been updated in 20 years.

The changes couldn't come at a better time.

"Farmland is being gobbled up at an alarming rate, and communities are developing at an alarming rate," he says. "If you don't set aside open space now, you're going to have to compete on the commercial market for it. As a public entity, it's unlikely that you'd ever be able to afford it. If you can get the money into the hands of the local community, they can really do some wonderful things with it."

Bethany Carson

*Photograph by Jay Zimmerman, courtesy of the Illinois Natural History Survey*



*About 15,000 acres in the Cache River Basin are protected jointly by the Illinois Department of Natural Resources, The Nature Conservancy and Ducks Unlimited. This is Little Black Slough.*

but not the one dedicated for open space. How that happened, according to May, came down to strength in numbers and a compromise.

The opportunity came when May and fellow Democratic Rep. Julie Hamos of Evanston were invited to the governor's office to negotiate specific budget items. That gave open space supporters leverage in saying they would support the budget only if that funding were protected and the state restructured payments to local agencies.

The fund got an approximate \$11 million increase, from about \$20 million to \$31 million in new spending ability. But some of the money was dedicated to Conser-

## UPDATES

- The federal government halted new construction of wind farms, including all in Illinois, to study whether they interfere with military radar (see *Illinois Issues*, July/August 2002, page 28).
- Congress wants a study on how government could enforce a ban on online gambling, as proposed by the House (see *Illinois Issues*, April, page 11).

- An appeals court decided white supremacist Matthew Hale of East Peoria will serve his 40-year sentence for charges of soliciting the murder of a federal judge (see *Illinois Issues*, June 2004, page 11).
- The latest deer attack on the Southern Illinois University Carbondale campus resulted in a minor injury to a university police officer (see *Illinois Issues*, February, page 12).



## NATIONAL PARKS

### Numbers indicate people may prefer home entertainment

After a steady half-century rise in visits to national parks, there has been a decline in the past two decades. A drop in visits can be statistically correlated to a rise in Americans' at-home activities and fuel prices, according to a study conducted at the University of Illinois at Chicago.

Oliver Pergams, a research assistant professor in biological sciences, tested and analyzed more than two dozen variables to try to determine why fewer people have been making family treks to the nation's natural areas. He and his co-author, Patricia Zaradic of the Stroud Water Research Center in Avondale, Penn., found that electronic media activities — playing video games, surfing the Web, watching rental movies, going to theater movies — and high oil prices accounted for nearly 98 percent of the decline in per capita U.S. national park visits since 1987.

"What we have here is correlation, not causation," says Pergams. When graphed, the analyses show how much the multiple

variables of media usage move in close tandem with the visitation to national parks.

These two major trends in American life — more sedentary choices for free time and a steady rise in the cost of driving a car — may not bode well for conservation. Pergams says more research is needed, but if this is a trend away from nature and toward a video screen, as their research suggests, it is not a good sign. Scientific studies show that contact with natural areas, especially for children, leads to an appreciation of nature and environmentally responsible behavior.

"I don't believe that people who are not connected to nature, to plants and animals, are likely to support conservation efforts, to put money into them or support them in other ways," he says.

The study, funded by the National Science Foundation through The Nature Conservancy, is in an upcoming issue of the *Journal of Environmental Management*.

*Beverly Scobell*



*More families, especially children, choose to spend leisure time interacting with video screens rather than with nature.*

## At the river's edge

A pilot program aimed at revitalizing contaminated riverfront property will offer tax breaks and state grants for old industrial sites known as brownfields.

However, \$15 million of the proposed grants to developers is contingent on approval of a borrowing plan for school and road construction projects. That portion of the plan failed to get out of the state Senate in the spring legislative session.

The five-year river community redevelopment initiative would start in three cities: Aurora, Rockford and East St. Louis. Statewide, between 7,000 and 10,000 river sites need assistance.

Maggie Carson, spokeswoman for the Illinois Environmental Protection Agency, says the cost of remediation varies according to the level of contamination and the size of the site. For example, Belvidere received \$1.6 million in federal grants to cover the costs of assessment, cleanup and redevelopment, whereas Rock Island only got \$200,000.

The Illinois EPA will administer \$5 million in cleanup grants. The Illinois Department of Commerce and Economic

Opportunity will oversee tax benefits.

The remediation of brownfields is considered a risky investment because of the complex, expensive and lengthy process. The potential liability of environmental and health hazards, for instance, could discourage businesses from redeveloping contaminated areas.

Department spokesman Andrew Ross says the program will help "former economic engines" of the state with the redevelopment expenses that serve as deterrents to the business industry. "The goal is to try to revitalize areas that have been sitting vacant and not creating tax revenue," he says.

Benefits, such as tax exemptions on building materials and tax credits for brownfield remediation, could lure businesses and developers into the cities and spur economic growth. In its first year, the incentives are estimated to be worth \$6.3 million.

Some critics argue that Aurora, Rockford and East St. Louis have a profitable economic infrastructure in place because of the casino industry and that there are poorer riverfront cities that could benefit

from the redevelopment program.

However, Rep. Linda Chapa LaVia, the House sponsor, disagrees. The Aurora Democrat says her district needs help in coping with the area's rapid growth. She says after the state gets its portion of casino profits, the city's portion is spread more thinly as the community's population continues to expand.

"Besides," she says, "the same people who are critical of my area getting the programs are the same naysayers that want to get rid of gambling."

Chapa LaVia says other cities would be eligible to apply for the pilot program. In fact, Yorkville Mayor Arthur Proehaska has already expressed interest in bringing the initiative to the Fox River town.

"Every city, regardless of size, wants to entice builders to their rivers. Whether it's vacationing or living, people gravitate to the riverfront. We just want to revitalize the property value along our waterways so people can live and play there," Chapa LaVia says. "Then we can give everybody the same tools to prosper."

A report on the initial program is due before 2010.

*Jasmine Washington*

## It's not just for humans anymore: Birds can learn to use grammar

Starlings of the European variety have shown researchers at the University of Chicago that they are capable of learning grammatical patterns thought to be unique to people.

Humans were the only animals thought to possess the ability to put sounds together to communicate specific meaning. We recognize that a clause added to a sentence changes the original meaning. For example, "The bird flew away" is different from "The bird the cat had in its mouth flew away."

By making changes in word choice, order and inflection, people "have created a rich, semantic knowledge that language allows us to impart through an agreed-upon set of rules," says Timothy Gentner, assistant professor of psychology at the University of California San Diego. "Birdsong doesn't have, as far as we know, that subtle a meaning reservoir to tap into," he says.

The research, which was conducted while Gentner was a professor at the University of Chicago, was joined by UC colleagues Daniel Margoliash, professor of organismal biology and anatomy, Howard

Nusbaum, professor of psychology, and researcher Kimberly Fenn.

The European starling was chosen for the study because it's a nonnative species that is so common as to be thought of as a pest by Midwestern farmers. But, mostly, it's a great singer with a structured set of vocalizations, says Gentner, making it a "rich playground" to try to learn how birds, and perhaps people, learn communication patterns. The males have created a complex

*Photograph by Daniel D. Baleckaitis, courtesy of the University of Chicago*



*European starling*

set of songs to attract females and set territorial limits for other males to heed. However, Gentner says he doesn't think the starlings are using their vocalizations with the same subtle meanings as humans.

"Then, if they don't naturally have these sorts of embedded patterns in their songs, what our study suggests is that the ability to recognize these patterns may not be as important and powerful a constraint on human language as many linguistic theorists have argued."

The basic idea, he says, is that here is a fundamental property that has long been thought to underlie the human ability to use grammar to create sentences that vary in meaning. A kernel of that property is the ability to recognize patterns embedded in a series. "We've shown the birds can do that. It doesn't mean that birds have language. It doesn't even mean they are using the same brain mechanisms that humans use to do it," says Gentner. "But they can do it."

*Beverley Scobell*

## Radon not on the radar

Sometimes the most harmful pollutants come from the least-suspected sources.

Radon, an odorless invisible gas, is a common pollutant and the second-leading cause of lung cancer behind cigarette smoking. The federal Environmental Protection Agency links it to about 21,000 deaths a year. Levels of the gas are present in buildings in every county in Illinois. Yet there are few protections in state law against long-term exposure.

Radon is a natural product of the breakdown of uranium. It poses a risk indoors because it seeps into buildings through the air and soil. According to the federal environmental agency, one out of 15 homes is at or above a level considered tolerable.

While Illinois doesn't require testing in homes or schools, Patrick Daniels, with the Illinois Emergency Management Agency's radon program, says the state strongly recommends tests. "People can't say they live in a certain type of home or in

a certain area and [so don't] have radon in their home," Daniels says.

Illinois is one of the few states providing radon-related safeguards for homeowners and buyers. Under state law, dangerous levels of the gas must be disclosed to potential home buyers. Radon specialists must be licensed by the state.

However, as with many indoor pollutants, public awareness about radon is minimal. Daniels says awareness remains a priority for the agency, which focuses on outreach through local communities.

Ruth Ann Lipic, with Illinois State University's Radon Awareness Program, says she uses various methods to spread the word through McLean County. Sometimes, she says, she speaks to community groups and sometimes she sets up informational booths at hospital health fairs. She even sends out discount coupons for radon testing in her area.

Lipic says, "We are not out there to scare people about what's in their home. We want to do whatever we can to get the word out so people can jump on the radon

bandwagon to get their homes tested and pass the word around."

Still, she says, most people are shocked to find out there are no state laws that require radon testing. "Radon is one of those consumer-driver issues. Once the public is informed, then they will go to their [lawmakers] to demand action."

And some people already have expressed concerns to state officials. Rep. Dan Reitz, who introduced a resolution urging radon testing for homes and schools in the spring session, says he became aware of the issue during a visit to the Statehouse by an eighth-grade science class. As part of a class project, the Waterloo Junior High students had conducted short-term home tests in their community and wanted something done on the state level to raise awareness about radon, the Steeleville Democrat says.

Reitz says, because this is a statewide issue, he plans to use the summer to study radon and hopes to introduce legislation next spring.

*Jasmine Washington*



# Ground to gumbo

The difference between feeding and polluting a body of water is the same as the difference between feeding and polluting a human body

by James Krohe Jr.

To most Illinoisans, the phrase “dead zone” suggests the Illinois State-house on a weekend, or Main Street after the Wal-Mart opens. But the dead zone that may end up mattering the most to Illinoisans is some 900 miles away, in the Gulf of Mexico off Texas and Louisiana. That part of the Gulf supports commercial and recreational fisheries that add some \$3 billion a year to the economy. And Illinois, some say, is killing them.

How? These fisheries depend on uncounted trillions of phytoplankton, the simple microscopic plants that are the foundation of a food pyramid that leads, through brown shrimp and Texas fishermen, to gumbo in the pot. These diatoms, cyanobacteria and dinoflagellates, along with many other half-reclected denizens of high school biology class, are fed substantially by nutrients washed into Gulf waters through rivers and streams — principally the Mississippi and its tributaries.

So far, so natural. But the difference between feeding and polluting a body of water is the same as the difference between feeding and polluting a human body at the dinner table. Which results depends on whether one feeds more nutrients into the system than the system needs. Excess nutrients, in the case of the Gulf’s shallow waters, don’t mean excess pounds, they mean excess populations of phytoplankton at certain times of the year. When they and the other myriad sea creatures that feed on them die, their



remains sink and provide a buffet for bottom-dwelling bacteria, which, unlike phytoplankton, consume oxygen. Beginning in late spring, the bacteria multiply so prodigiously that they suck the oxygen out of the bottom waters. The condition has a name — hypoxia — which is defined as the presence in water of less than 2 parts per million of oxygen, as compared to normal levels of 4 to 6 parts per million.

Fish, shellfish and other sea creatures can’t survive in hypoxic waters. Organisms that can move, do, in search of water with higher oxygen levels; those that can’t move, die — hence the headline-friendly term dead zone. Like most headline phrases, this one is more dramatic than accurate. The zone only lasts a few weeks each summer — bottom waters are mixed with oxygen-rich surface waters when the latter cool and sink come autumn — and, for the moment, the

bigger threat to Gulf fisheries is rising fuel prices. Nonetheless, a spreading hypoxic zone is generally considered a threat to the sustainability of local fisheries. Brown shrimp, a chief prize, are forced to move into less element water, where their growth rates slow by 5 percent to 20 percent.

The hypoxic zone is not new to the Gulf. It was first noted in 1978, but scientists have since determined that large areas of hypoxic bottom water are a recurrent feature in the summers. Neither are hypoxic zones unique to the Gulf. The phenomenon exists in several parts of the world; in North America, for instance, dead water can be found in the Chesapeake Bay and the Sea of Cortez.

What is new about the dead zone in the Gulf of Mexico is that it is growing. After the 1993 Mississippi River flood, the dead zone suddenly doubled in area. That wasn’t surprising: the flood flushed a lot of stored nutrients off the land and into the Gulf. The shocker came afterward. The zone didn’t shrink to pre-flood levels for the following three years; indeed, the hypoxic zone reached its largest extent in the summer of 2002, when it sprawled across roughly 8,000 square miles — basically, the size of the northeastern quadrant of the state.

In 1997, the latter days of President Bill Clinton’s administration, when green was still a color on the political spectrum along with red and blue, the U.S. Environmental Protection Agency

# Mississippi River



About 3,000 miles long, the Mississippi River drains 40 percent of the continental United States.

set up a Mississippi River/Gulf of Mexico Watershed Nutrient Task Force. The new body, made up of eight federal agencies and 10 state agencies, was not charged with solving the problem, but with solving the problem of how to solve the problem. The task force, therefore, began an ongoing scientific assessment of the causes and consequences of Gulf hypoxia with an eye toward eventual management programs to reduce the damage.

And why was Illinois included on a task force to save the Gulf of Mexico? As with any murder case, the investigators started with the obvious suspects. In 1999, the National Oceanic and Atmospheric Administration's National Centers for Coastal Ocean Science tentatively fingered the bad guy: Colonel Nitrogen done it, in the basement. A substantial source of excess nutrients, all seemed to agree, was fertilizers washed off farm fields in the Midwest, in particular nitrates that originate in the anhydrous ammonia that farmers add to cornfields like kids add sugar to cornflakes. Based on that finding, the Task Force on Gulf Hypoxia in 2001 developed a national "action plan" with a goal to reduce nitrogen coming down the Mississippi River by 30 percent by 2015.

From the view of a lot of Illinoisans, however, much of the science that backed up this nitrogen-reducing action plan stank more than a Louisiana bayou in August. While common sense suggests that farm fertilizers are a significant source of nutrients, it was not yet proven that they were the decisive ones, or that the recent changes in the size of the dead zone can be attributed solely to human intervention in the Gulf ecosystem, much less to any one human source.

"What exactly is the cause?" asks Rodney Weinzierl, executive director of the Illinois Corn Growers Association. "There are two camps. The initial camp says, 'It's all nitrogen, all nitrogen, all nitrogen.' Well, prairie soils have a natural abundance of nitrogen. Yes, there's supplemental nitrogen added for growing crops, but from a per bushel standpoint, that's been going down for 10 [to] 20 years." Weinzierl points out that phosphorous is another potent plant nutrient, and surface waters have a lot of phosphorous put into them from sewage

treatments, loadings that are increasing with population. "The nitrogen camp is so fixated on nitrogen that they are not looking at phosphorous loading, which over the past 20 [to] 30 years has been a bigger issue."

Such views matched those of many of Illinois' public scientists. In a biting comment on a 2004 U.S. Environmental Protection Agency report that continued to point the finger at nitrogen as the sole perpetrator in the Gulf, the Illinois State Water Survey complained, in effect, that the federal environmental cops had been chasing the wrong guy. The survey's chief, Derek Winstanley, insisted to the NOAA agency coordinating the research that the initial assessments of the problem on which the 30 percent nitrogen reduction target was based were flawed by what he called "a preconceived bias to identifying excess nitrogen as the problem" and nitrogen control — especially from agricultural fertilizer application in the Midwest — as the solution. He called for a new, independent assessment.

It isn't accurate to say that the case against nitrogen has been reopened — it was never really closed — but it is fair to say that investigators are looking at a wider range of suspects. Exhibit A for the defense, from the view of Illinois ag interests, is this: Nitrogen use on Illinois farms has dropped by two-fifths during the period when the size of the zone has nearly doubled. "The longer the research goes on, and the more data is collected," says Winstanley now, "the more apparent that inconsistency [between presumed cause and effect] becomes."

By 2002, the federal agency, in its summing up of the state of the inquiry, declared that while the general agreement that nitrogen availability determines the overall productivity of the Gulf system still held, the effect of nutrient availability on hypoxia "may be much more complex than previously realized."

This reassessment, it should be pointed out, is how science gets done. From the start, ameliorative actions were to be adjusted according to the findings of ongoing research. On some days, there may be more scientists on the Gulf than there are fishermen. State and federal environmental agencies, other federal agencies and more than 70 universities



and institutes are listed as partners in the research, along with Native American tribes, Canadian provinces and 15 non-profit labs.

Like the characters in today's faddish detective show subgenre, many of these scientists are busy applying advanced forensics to settle how the victim died, and what killed him. The phytoplankton in Gulf waters comprise many species whose growth is limited by different nutrients and whose populations bloom and fade at different times of the year and in different parts of the Gulf. Tracing cause of death in such a dynamic and complex system is hard to do, which is why there is no DNA test to conclusively determine whose hand — anthropogenic nitrogen or phosphorous or, more likely, some mind-numbingly complicated combination of many factors — is shaping the size of the dead zone.

"Definitely, it's gotten more complicated," explains Dennis McKenna, the deputy administrator of the Illinois Department of Agriculture's Division of Natural Resources. He notes that conversations have begun at recent task force conferences about a dual strategy of controlling both nitrogen and phosphorous. Whatever happens, reviving the Gulf is likely to disappoint those who prefer their environmental controversies to resemble criminal trials. This one is more likely to resemble a legislative session, in which policymakers feel obliged to come up with compromise solutions in the face of conflicting facts and competing interests.

Much of the dead zone debate is not really about shrimp. It's about agriculture, specifically the intensive production of grains, and its wisdom, its costs and its environmental effects. The Illinois corn farm is as automated and high-tech and capital-intensive an operation as any factory in the state; unlike a conventional factory, its operations affect a great deal of land — a record high 12.1 million acres in 2005, which is almost 19,000 square miles.

Environmentalists have long tried to tie down ag to keep it, variously, from polluting drinking water wells or clogging reservoirs with eroded farm soils. Farmers, though, have proven to be nimble business people indeed.

Of all the state's great industries, production ag is the least strictly regulated in its environmental effects.

Thus the eagerness with which some environmental activists have taken to dumping shrinking shrimp at the farmhouse door and crying, "Shame!" In April of this year, the Environmental Working Group, a Washington, D.C.-based green group, issued a luridly titled study, *Dead in the Water*, that used computer modeling to track the sources of the fatal nutrient loads. It found that heavily farmed counties that cover 15 percent of the Mississippi River basin account for 80 percent of the spring surge of fertilizer that washes into the river and thus, eventually, the Gulf. Inevitably, counties that produce the most corn, and apply the most fertilizer, were fingered as the biggest contributors to the nitrogen loads heading south. Among those cited in the study as the worst offenders were such Illinois counties as Iroquois, LaSalle and McLean.

Bad enough, one would think, but the Environmental Working Group went on to point out that, far from feeding the cities, corn farmers are being fed by the cities through subsidies in the form of price supports. According to the group's figures, farmers flush more than one-third of a billion dollars of nitrogen fertilizer down the Mississippi River each spring. Such profligacy is survivable because tax money, in the form of price support payments, provides an incentive for Illinois farmers to produce a lot of nitrogen-hungry corn. The group's study charted the presumed major sources of nitrogen and noted where the subsidy checks are mailed; the locations overlap.

Put crudely, losing a third of a billion to qualify for \$60 billion in subsidies is good for business, if bad for the Gulf. The Environmental Working Group argues that getting the taxpayers to pay to fix the problem of nitrogen loading in Gulf coastal waters would be unnecessary if taxpayers stopped paying farmers to cause it. The headline on the press release announcing the report reads, *Farm Subsidy Reform Key to Restoring Gulf of Mexico 'Dead Zone': Programs Waste Taxpayers' Money While Subsidizing Pollution Threatening Top U.S. Fishery*.

Ag advocates complain, with some

justice, of a double standard. The homeowner lavishing fertilizer on her own little back 40 in the form of the suburban-style lawn also contributes to nitrogen loading in the Gulf, and if lawns are collectively a less significant contributor, it is only because less Illinois land is (at least for the moment) planted in turf grass than is planted in corn. Indeed, only the size and cost of their tractors separate the corn farmer tilling a field and the yard-proud suburbanite mowing land that is bigger than she might otherwise afford because of the federal tax subsidy in the form of the home mortgage interest deduction.

Certainly, federal crop programs should not have pernicious environmental effects. But neither should a mandated reduction in nitrogen use be imposed in the absence of sound evidence of its necessity. The Corn Growers' Weinzierl notes that Illinois corn farmers are becoming more nitrogen-efficient, thanks in part to its high price, and the problem already is being solved. "Our fear is that, if the science community believes that ag is the sole problem, and they're wrong," he says, "then, one, regulation will be directed toward the wrong sector and, two, [we] will be trying to solve the wrong problem."

Yes, it is standard procedure to plead, "Where's the science?" The position taken by the ag industry sounds a lot like that taken by Big Tobacco in the face of evidence about lung cancer, and by the electric utilities about global warming. But delay is not corrupt only because it benefits an industry, any more than a regulation is evil just because it harms one. The fact is the science is not persuasive enough to support a strict (and expensive) regulatory regime. This is not an argument for doing nothing but for doing nothing precipitously. Curing a problem before it becomes a bigger problem is prudent; it also can be expensive.

The new questions, and the new findings that presumably will come as people try to answer them, are more likely to refine the case against nitrogen than disprove it, and nitrogen use will remain the target of whatever reduction policy is eventually adopted. A U.S. Environmental Protection Agency advisory panel is expected to convene this fall, and by next summer issue its best answer about

what is causing the dead zone. Potentially, the implications for Illinois are huge. "Some people are now talking about the necessity of a 40 [to] 45 percent reduction," says the Illinois agriculture department's McKenna. "I don't think we can achieve that without large changes in the cropping system."

Illinois farmers are concerned about the impending verdict — farmers always have something to be concerned about — but they seem more worried there's too little summer rain than too much regulation. Precipitate regulation is not something that recent Congresses have been famous for. Indeed, the President George W. Bush-era Congress seems not inclined to do much of anything about hypoxia in the Gulf. (There has not been a significant infusion of federal research money, for example, for the past six years; what work has been done in Illinois was paid for by using scarce state funds.) The election of a Democratic president and/or Congress more receptive to environmentalism may change that. But, when asked what they think about the killing in the Gulf, it's not the shrimp in the Gulf of Mexico that Americans have on their minds.

When it comes to how nitrogen use might be reduced, there is a firmer consensus on what won't happen than on what ought to happen. "I don't think that anyone wants a regulatory approach," adds McKenna. The task force's goal of a 25 percent reduction does not have statutory power. It's a "good idea" kind of objective, to be achieved through the usual voluntary, cooperative and collaborative compliance of the sort that polluters who want to head off compulsory regulations and protectors who fear they can't get compulsory regulations agree to.

Such approaches certainly aren't politic. When the subject comes up, farm groups intone ancient chants to ward off "heavy-handed and cumbersome regulations" — meaning the Environmental Protection Agency — and "excessive taxes or outside entities trying to micromanage farmers [sic] business operations" — meaning environmental groups. Any reduction targets or regulations or management strategies that result from the research now under way must be "workable" (not cost any of their members

a lot of money), the whole problem needs more research (they should keep looking until they get an answer we like) and hypoxic zones are found in most of the oceans of the world (if others can get away with it, why can't we?).

*Various remedies* have been proposed. The greenish Worldwatch Institute preserves its credentials as both green and free-market by urging trading in nutrient allowances through a new market of the sort that now operates to reduce sulfur emissions. More observers pretty much agree, however, that the most cost-effective and certain solution is improved agricultural practices coupled with restoration of wetlands in the river basin.

The first — improved agricultural practices — already is happening in Illinois for reasons that have nothing to do with shrinking shrimp. Illinois corn farmers have seen average yields go up 20 percent to 22 percent in the past 15 years, but nitrogen applications per bushel have been going down, thanks to superior hybrids and satellite-linked tractor guidance systems that allow more precise fertilizer application. Adoption of such innovations has been spurred in part by the cost of nitrogen, which has gone up 300 percent in the past few years as the cost of natural gas (from which the common forms are synthesized) has gone up.

Making such efficiencies general is the ultimate aim of hypoxia-related research here in Illinois. In the Sangamon River watershed upstream from Lake Decatur, for example, three interrelated projects are under way to learn how farmers can be even more efficient in the use of fertilizers — on-farm trials of GIS-based software and precision agriculture, the use of subsurface bioreactors to reduce movement of nitrates through drainage tiles to surface waters, and an assessment of the economic and environmental benefits from improved phosphorus management.

Just as effective as putting less nitrogen on the field is keeping more of it from leaving the field, or at least keeping it from entering surface waters that ultimately carry it to the Gulf. Remedies include planting buffer strips of grass that interrupt the movement of dissolved nitrogen off

fields and allow it to break down naturally in soils before it gets to streams. A test of the cost-effectiveness of building and/or restoring wetlands in riparian ecosystems to act as natural barriers between farms and the streams that ultimately feed the Gulf was done not long ago at Hennepin and Hopper lakes in Marshall County along the middle Illinois River. The project converted more than 2,600 acres of cropland to bottomland forest, backwater lakes and floodplain wetlands. The analysis showed that, consistent with the assumptions of the analysts at least, such projects are feasible ecologically and economically. Some farm experts worry, however, that if a hypoxia reduction scheme called for creation of wetlands proportional to the state's input to the problem, some 5 million acres of wetland would be needed in Illinois.

There is, of course, the vexing issue of who is to pay for building these wetlands and other buffers, and for the lost income that conversion will inevitably cause. On one side are those who believe that hypoxia in the Gulf is a problem that spans state borders and affects the national economy, so it's only fitting that the nation pay to fix it. On the other side are those who complain that nitrogen-reduction incentives to farmers would be bribes to get farmers to do what they ought to do anyway; no one pays city dwellers not to dump their trash in public streets, so why should farmers get paid not to dump their garbage in public waterways?

The Environmental Working Group urges what it calls "well-funded opportunities for easements and riparian and wetland reserves," which makes plain the group is not opposed to federal outlays if they buy behavior it endorses. One doesn't have to be green to think this a good thing; for decades, the feds paid farmers not to grow certain crops in an attempt to reduce price-busting surpluses, which returned few benefits to the public that was paying for them; paying them now not to grow pollution would seem a better bargain. □

*James Krohe Jr., a veteran commentator on Illinois public issues, is writing a guide to the state's history for the Illinois Humanities Council. He is a frequent contributor to Illinois Issues.*



# RENEWAL

## *Disturbed land can return to its natural state and we can learn a lot from the transformation*

Illinois is striving to preserve and protect its last few wild places — even, occasionally, returning farmland to Nature. The Illinois River Valley and the Cache River Basin are two areas of the state rich in habitat and in various stages of restoration, regeneration or preservation. Scientists, students and citizens with a passion for the natural world have been playing a part in their renewal.

The Nature Conservancy, working with state and federal agencies, is restoring the vast floodplains along the Illinois River. It has transformed Spunky Bottoms in Brown County into a thriving wetland landscape, including a replanted bottomland hardwood forest and a reseeded upland prairie. Once drained and farmed, the 2,026-acre site now is home to one of the most abundant populations of northern cricket frogs in the state. In the spring, more than 16,000 waterfowl rest and eat in its waters during migration. Uncommon species such as river otters and American bitterns also call it home.

But Spunky Bottoms and similar restorations at Lake Chautauqua and Hennepin-Hopper Lakes are

but overture to the symphony expected at Emiquon near Havana. The 7,100 acres in Fulton County will be turned from farmland to wetland, edged by upland prairie, blufftop savanna and bottomland forest. The conservancy's scientists will help the process by planting trees and seeds, in some cases reintroducing native Illinois species. Ecologists will use the latest science and technology to record the changes in this large-scale restoration, which will function as a model for other floodplain restorations throughout the world.

Unique to Illinois, though, is a companion project led by a team at the Illinois Natural History Survey. In the spirit of the Lewis and Clark exploration, entomologist Mike Jeffords enlisted 45 citizens to be an Emiquon Corps of Discovery. Trained in photography, descriptive writing, poetry, drawing and painting, they record their observations to create a "total aesthetic picture" of Emiquon as it regenerates. Each year's work is displayed at Dickson Mounds Museum. This year, a second, 29-member Cache River Corps of Discovery is artistically documenting that biological diversity.

*The Editors*

*The Illinois River Valley viewed from Morton Ridge, site of the proposed Emiquon Heritage Observatory, overlooking the Emiquon Preserve.*

*Photograph by Kelyn Sampson, courtesy of Dickson Mounds Museum*





*UIS biology student Andy Grant and high school student Nick Bolme wade through a thick stand of giant ragweed at the unrestored LaGrange refuge near Meredosia.*

*Courtesy of the University of Illinois at Springfield*



*Wetland grass emerges from standing water at Emiquon.*

*Photograph by Kelvin Sampson, courtesy of Dickson Mounds Museum*



*A migrating egret forages for food at Emiquon.*

*Photograph by Kelvin Sampson, courtesy of Dickson Mounds Museum*





*Moonrise over Spunky Bottoms inspires a chorus of animal songs.*

*Courtesy of the University of Illinois at Springfield*



*A UIS student holds a bryozoan living in the LaGrange refuge waters.*

*Courtesy of the University of Illinois at Springfield*

SNAIL SHELLS - bleached white



*Citizen scientist Margaret Ovitt with the Emiquon Corps of Discovery recorded observations during restoration.*

*Drawing by Margaret Ovitt, courtesy of the Illinois Natural History Survey*





*Sunset over an Emiquon backwater near Dickson Mounds highlights the potential of the 7,100-acre preserve to return to its natural state.*

*Photograph by Kelvin Sampson, courtesy of Dickson Mounds Museum*



*Emiquon backwater plants glow at sunrise.*

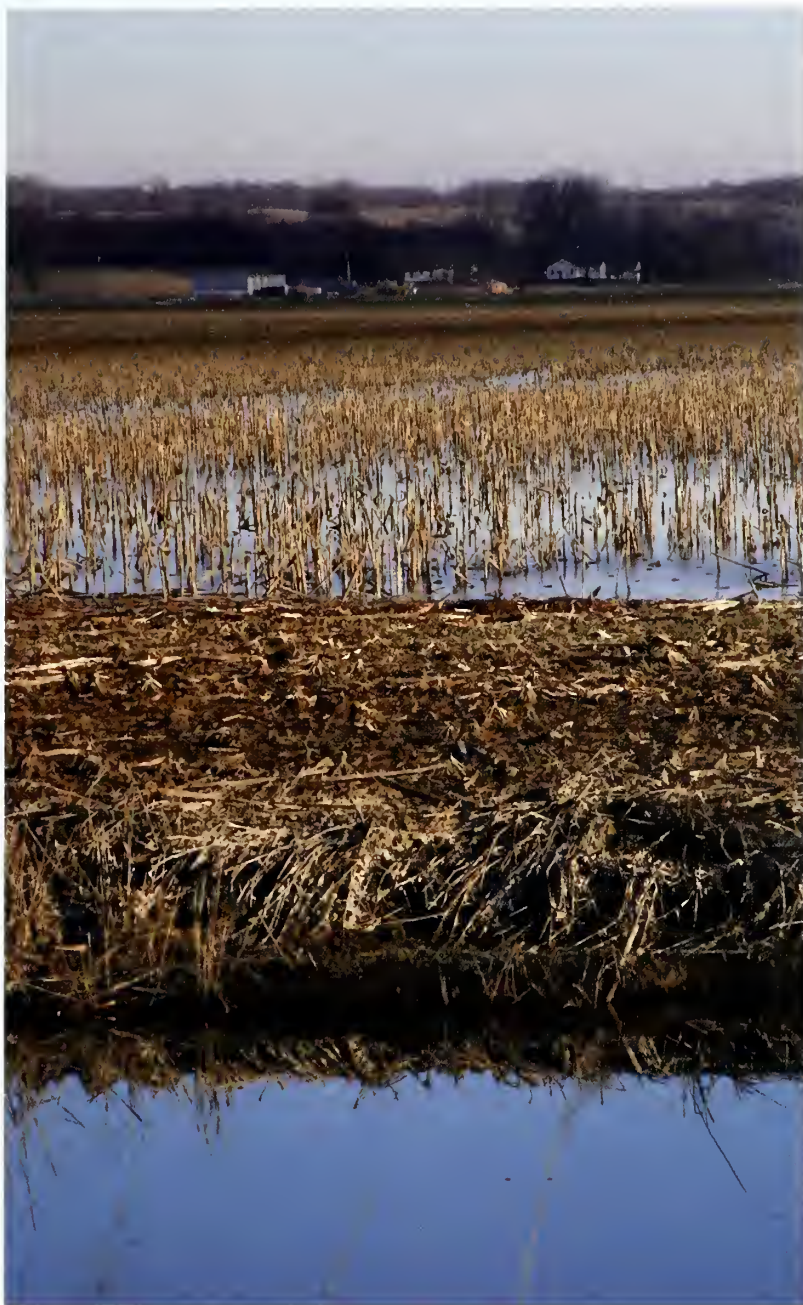
*Photograph by Kelvin Sampson, courtesy of Dickson Mounds Museum*



*A red-tailed hawk keeps an eye on intruders at Emiquon.*

*Photograph by Kelvin Sampson, courtesy of Dickson Mounds Museum*





*As the pumps fall silent in the cornfields, the waters of Emignon rise, illustrating the ease of conversion.*

*Photograph by Kelvin Sampson, courtesy of Dickson Mounds Museum*

*Canada geese take flight from Emignon.*

*Photograph by Kelvin Sampson, courtesy of Dickson Mounds Museum*

*Three pairs of Canada geese feed in the shallow water.*

*Photograph by Kelvin Sampson, courtesy of Dickson Mounds Museum*





# ADVICE

*Poem by Deane Doolen  
Emiquon Corps of Discovery*

*E* NJOY  
*M* <sup>the</sup> AJESTY  
*I* <sup>and</sup> NSPIRATION  
*Q* <sup>and</sup> UINTESSENCE  
*U* <sup>of all</sup> NIQUE  
*O* BSERVATION  
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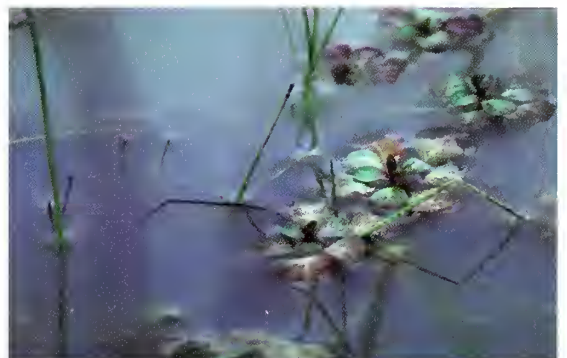


***Last fall, as water filled the fields at Emiquon, thousands of waterfowl stopped to rest and feed.***

*Photograph by Doug Blodgett, courtesy of ©The Nature Conservancy*

***Russell Clendenin, Reud Lake Community College instructors and Cache River Corps of Discovery member, captured the colors of these water plants near the Barkhausen Wetlands Center in Johnson County.***

*Photograph by Russell Clendenin, courtesy of Illinois Natural History Survey*







*A fleet of ducks sail effortlessly in a drainage ditch, created for previous farming operations.*

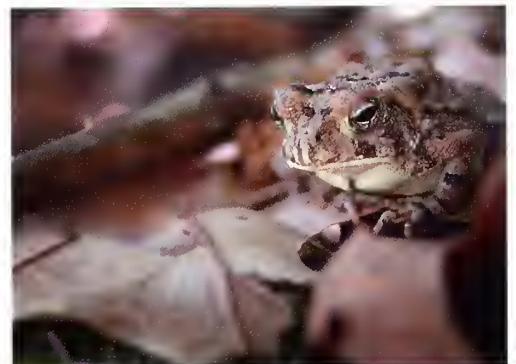
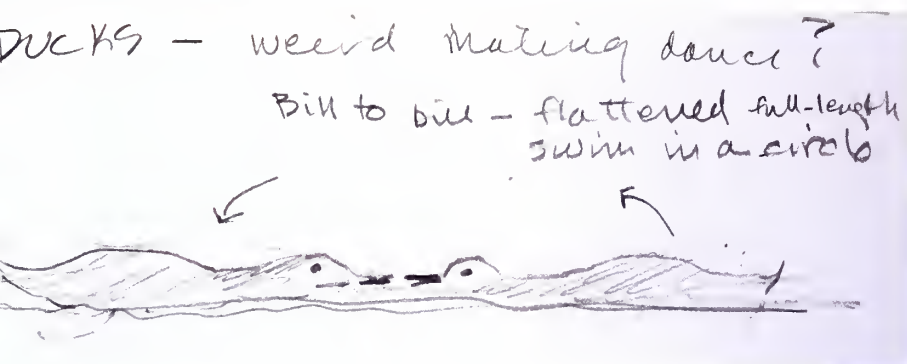
*Photograph by Kelvin Sampson,  
courtesy of Dickson Mounds Museum*

*Emiquon Corps of Discovery sketch artist  
Margaret Ovitt notes animal behavior.*

*Drawing by Margaret Ovitt,  
courtesy of the Illinois Natural History Survey*

*Jan Smudberg, a Cache River Corps of Discovery  
photographer, catches a toad resting on leaves.*

*Photograph by Jan Smudberg,  
courtesy of the Illinois Natural History Survey*



# BIG EARTH, BIG HISTORY

*Many refuse to entertain the idea that the Earth has some influence on our past and our future*

Review essay by Robert Kuhn McGregor

Few disciplines ask quite so much as the study of history. Consider for a moment the millennia intervening since the invention of written language. Couple to that the resilience of human cultures spread across the globe. The sheer task of recording it all — much less explaining what happened and why — levels the imagination.

Small wonder that high school students hate history worst of all — so much to know, and much of it so foreign to ourselves. Even the professionals have for the most part thrown up their hands, choosing to parse the subject into recognizable lumps: national histories, cultural histories, gender histories, immigration histories, religious histories. Some of these lumps have beckoned discord. Why study poor black women instead of rich white men? Why study statistics rather than those uplifting (if patently misleading) biographies?

We need worry no more. Troubled by the divisions within their own craft, a few historians have focused on a new approach. No longer will we parse anything. From this point onward, we will look backward to tell but a single story —

one history. And, appropriately, we will call the endeavor “Big History.”

I am not making this up, and I am wondering only if this new history will prove big enough to confront the more pressing conceptual problems we face. For the past several thousand years, human beings flung across the surface of the planet have steadfastly refused to entertain the idea that the Earth itself has some influence on our past and (more important) our future. If history is to be truly big, in a world characterized by weather, disease and plate tectonics, it is going to have to address something more than simple human actions. Let us enlarge on Big History.

The current hot number in the Big History racket is a book by David Christian entitled *Maps of Time: An Introduction to Big History*. It is a large introduction, covering more than 500 pages and beginning with the evolution of the universe over the past 13 billion years. Human beings make no appearance in the book until the one-quarter mark, and yet, strange to say, the author is reluctant to deal with anything resembling an environmental question.

Christian maintains the hopeful notion that we are in charge of our own destiny, that the Earth is nothing more than a stage and a basketful of natural resources ripe for the plucking. What supposedly drives human history is our propensity to multiply and our clever responses to the pressures of a constantly growing population. That kind of interpretation makes for a long, predictable and surprisingly pointless glance at our own past. We move, faster and faster it seems, and yet we don't really learn anything.

Christian operates within the boundaries of a fear common to all historians: He does not wish to be labeled a determinist. For as long as analysts have occupied armchairs, there have been those prepared to explain the human condition as a product of geography, of climate, of biological instinct, of fate — of some agency outside ourselves. Recognizing that human beings are in fact intelligent and manipulative, historians have roundly rejected such deterministic arguments, maintaining that we have created the world we occupy. This contention is, of course, equally silly. We are not automatons; we do have agency, but we ignore the environment at



our peril. Anybody can build a big house at the foot of an active volcano, but they would be insanely foolish to do so. We can shape the Earth to some small extent, but the Earth has a role in shaping us as well.

If we are going to have Big History (and it looks as if we are), we are going to have to come to some understanding of how this Earth works, and how we as a species have responded to its workings. There are some basic earthly conditions every historian (dare I say every citizen) should know and understand. The most important of these is that the Earth, quiet though it seems, is not stable. Land masses are in constant slow motion, punctuated by occasional ominous shaking. And, the entire planet is moving, wobbling on its axis, changing its distance from the sun. Then, too, life on the planet is moving. Plants, animals, microbes especially, are shifting their ground, partly in response to human behaviors, but more often because of shifting conditions in the Earth's own systems. Any Big History worthy of the name is going to have to be big enough to encompass these essentials.

It really is striking how recently we have come to remotely understand even a little of the Earth's mechanisms. Begin with that most staid of Earth sciences, geology. Volcanism, erosion, sedimentation — building up the Earth, tearing it down — we've known the basics for centuries. But only in the past 50 years have we come to grips with the fact that whole continents are on the move — have been moving since the beginning. What is now North America lay mostly south of the equator when the first multicelled life-forms appeared. At one point, all the continents were stuck together. Think of the influence on life's development the shifting continents have wrought.

But this is just natural history you say, all of it very old. As an antidote to that kind of self-delusion, try reading Simon Winchester's *A Crack in the Edge of the World*, his take on the California earthquake of 1906. As Winchester points out, when volcanic eruptions add bulk to the islands east of Iceland, the activity marks a buildup of the pressures along California's San Andreas Fault, thousands of miles westward.

Iceland and California stand at the eastern and western perimeters of the North American tectonic plate, on which

most of our continent rests — and rests uneasily. When the Denali Fault earthquake struck Alaska in 2002, the geysers in Yellowstone Park altered the regularity of their timing by the same amount — there is an intimate geologic connection between Alaska and Wyoming. The continental plates shift and grind one against another, the Earth quakes, and people do their best to survive. An earthquake centered at Lisbon, Portugal, killed tens of thousands in 1755; a quake caused by a buckling of the North American tectonic plate in 1812 shook New Madrid, Mo., enough to make the Mississippi River appear to run backward. California hedges its bets against the next big one, as should Illinois. These are not acts of God, but acts of the Earth, unpredictable yet inevitable so long as the laws of physics persist.

Shifting attention from something as large and depressing as a geologic fault, let us turn to the tiny world of the microbe. Bird flu is the disease of the moment, unseeable, threatening, perhaps deadly. There are lots of birds in this world, flying

hither and yon, and we know precious little about the strange quasi-life-forms, the viruses that inhabit their avian systems.

Most people do not understand, for example, that essentially all forms of flu originate in bird species — to call this next dreaded disease bird flu is to intone the obvious. More essentially, we seldom stop to consider that this bird flu business is little more than the latest exemplar of a pattern as old as humanity. Historians have done depressingly little with this critical subject. William McNeill's *Plagues and Peoples*, first published 30 years ago, remains the best examination of disease as an influence on the course of human history.

Essentially, McNeill sees the pattern of human disease taking shape in a series of four stages over the past 10,000 years. Initially, diseases were confined to small and scattered forager-hunter groups that initiated little contact with one another. The invention of agriculture and the attendant rise of urbanization drew the small groups into larger pools where germs flourished. Then came the communication between the different civilizations: Egypt and Mesopotamia, the Indus Valley, eventually China and Rome. Each imperial grouping had developed its own disease pool, which it unwittingly came to share with the others. (Rome's fatal weakening came amidst episodes of epidemics that probably originated in China.) The fourth stage came when the Old World sailed onto the shores of the New. Eurasian diseases attacked a Native American population possessing no antibodies; epidemics of smallpox and other plagues killed at least 20 million people.

With that last fatal association, the world's human population became one vast disease pool, as far as the microbes were concerned. This news was both good and bad, to William McNeill's way of thinking. There are no more isolated populations of large number, poised to change the balance of immunities. But any disease that does gather strength (AIDS comes to mind) moves quickly across a world without meaningful microbial barriers. The flu in Southeast Asia is the flu in the American Midwest in a matter of months.

I am uncertain whether the kind of

### MAPS OF TIME *An Introduction to Big History*

David Christian  
Foreword by  
William H. McNeill

University of California Press, 2004



### A CRACK IN THE EDGE OF THE WORLD

*America and the Great  
California Earthquake of 1906*

Simon Winchester  
HarperCollins, 2005

### PLAGUES AND PEOPLES

William H. McNeill  
Anchor Books/Doubleday, 1977

### FLOODS, FAMINES AND EMPERORS

*El Niño and the Fate  
of Civilizations*

Brian Fagan  
Basic Books, 1999

epidemiological history McNeill and others convey is much comfort in a world chock full of mutating microbes. But I do know that a carefully conceived and well-researched historical analysis beats the living daylights out of the ill-informed and perspective-poor reports we get when somebody — anybody — screams “bird flu.” There is some security in knowing the world has seen such things before, that human populations somehow managed to survive. And went on multiplying.

Far more arcane still to the average underdetermined historian is the problem of air and water temperature. I hesitate to use the word weather or climate here, as the phenomena that I want to discuss lie somewhere in the interstice between the ways we typically define those words. Weather is what’s going on outside — cold and rainy today, maybe a little warmer tomorrow. Climate is the averages of years and years of weather — frosty in Alaska, hot in an Illinois summertime, really hot in Sumatra. Neither concept much interests historians, but the peculiar and sometimes stark ramifications of weather do generate considerable discussion. These can be sudden changes, such as an El Niño event, or subtle, long-term events — global warming or perhaps an ice age. Unlike climate, which seems stable and a little dull, discussions of climate change have become heated. Historians should have some perspective to offer.

Part of the problem in coming to grips with climate change is that the science is (again) so new. Only in the past century and a half have we come to perceive the evidence of past glaciations and their effects on the landscape. The still unpredictable behavior of water temperatures and their role in dictating the flow of ocean currents is a still newer and more tenuous study. We now know that the uneven heating of waters in the broad Pacific can trigger shifts in currents that bring spates of warmer winter weather to the American Midwest and complete ecological disaster to the South American coast.

Looking backward with such principles in mind, we can see their influences on world history. Brian Fagan, in his book *Floods, Famines and Emperors: El Niño and the Fate of Civilizations*, offers a series of case studies demonstrating the impact of El Niño events. The victims may include ancient Egyptian pharaohs,

South American chiefs, Mayan lords and American pueblo dwellers. In no case is Fagan foolish enough to argue that El Niños destroyed a civilization. What he does say is that such events delivered grievous wounds to peoples already in conflict, further unbalancing already festering weaknesses. Prolonged bad weather can make a difference.

As can a slower, more long-lasting climate change. Several are traceable in human history. Reaching back to the very beginnings of agriculture 11,000 years ago, a sharp cooling of the world’s temperatures probably lent impetus to the necessary horticultural experiments. Over the next 6,000 years, climates warmed and cooled in wild swings of fortune; it was not until 3000 B.C. that the “modern climate regime” took shape, marked by far steadier annual temperatures and rainfall. The first civilizations took shape at just this time — no accident, that. Even this modern regime has witnessed some minor but influential shifts; the “Little Ice Age” of 1400 to 1850 saw temperatures cool enough to defeat the Viking empire, bring starvation episodes to Northern Europe and leave Southeast Asia without monsoonal rains. Climate has a history, and its episodes have produced considerable change in human behaviors.

Again, the science making possible our understanding of climate change is quite new. The mechanics of Earth’s complicated orbit were not seen as contributing to global temperatures before the 1920s. Using pollen cores from bog ponds, tree rings and glacial ice coring to track and date climate history has matured only since World War II.

This is still a developing science, but it has produced two salient facts of immense value to historians: Over the long history of the Earth, climate change has been immense; and human civilization has developed during a relatively short 5,000-year period of comparative stability. When the Earth passes out of this stable period, we may expect far more in the way of violent weather. Tornadoes, hurricanes, typhoons, floods, droughts, you name it. As a species, we have been living the good times.

As everyone not living with their head in the sand must know, America’s political leaders have been engaging in a very silly debate over this global warming issue. The

conversation (if that’s what it is) does not deserve much space; suffice to say that some folks have gotten so indignant about identifying the causes of climate change that they have tried to suppress the evidence that the change is happening. The simple fact is, the causes do not really matter. It may be logical to blame ourselves and our industrial pollutants; on the other hand, it may be an odd form of that old hubris: We control the Earth. What does matter is that the climate is changing, growing warmer. From Ireland to Iceland, the evidence is overwhelming. Climate is changing.

History beckons, telling us that in the past, when populations were much smaller, societies considerably less elaborate, climate change brought disaster and devastation. Humanity suffered; entire civilizations lost their way. These things happened. Armed with such historical knowledge, we might consider putting aside the arguments about the warming and instead consider making some preparations — alternate crops, alternate fuels, alternate economic strategies, that sort of thing. Not that I have much hope on this score. I am a historian, you understand.

**Big History.** From where I sit, the idea seems to be worth pursuing. Humankind has a whale of a story to tell about itself, and the tale can only get better in the telling. But if it is going to succeed, Big History is going to have to get much, much bigger. The Big Historians are going to have to take into account that we are all floating around on tectonic plates, pieces of the Earth that rub against each other and shake us for dear life. They will have to consider the microbes that float along with us, jumping from plate to plate, sometimes killing 20 million people at a jump. And they will have to remember that we live on a planet orbiting a sun, that our relationship to the sun’s heat is cyclical and not constant. It does not take much temperature change to send the ocean currents on different and disastrous paths.

If the Big Historians can encompass all that historical information, they really will produce a story. Perhaps even a useful one. □

*Robert Kulin McGregor, an environmental historian at the University of Illinois at Springfield, is a frequent contributor.*



# Aisle of opportunity

Consumers will gain options as superstores enter the organic food market. But Illinois farmers have been slow to cash in

by Bethany Carson



Grocery aisles offer something for everyone these days: low-sodium soup for adults with high blood pressure, gluten-free pasta for children with wheat allergies and “Certified Humane Raised and Handled” meats for animal lovers of all ages.

As choosy consumers seek healthier options, the food industry is responding. And some familiar players are entering the market. General Mills, Kellogg and Kraft, among others, are snatching up organic brands. And in the near future, Chicago-area shoppers could pick up organic items at more independent food

stores and in more than a dozen Whole Foods Markets. Soon shoppers won’t even have to seek out specialty businesses. Increasingly, organic food will become available at one-stop-shopping superstores, such as Target and Wal-Mart, which is positioning itself to become a top dog in organic retail.

While the demand for organics is hot, the local supply is not. The Organic Trade Association’s 2004 Manufacturer Survey showed that U.S. organic food sales had tripled since 1997, growing by more than 20 percent in 2003 alone. However, the demand for insecticide-free,

pesticide-free, nonbioengineered fruits, veggies, grains and meats has outpaced the capacity of many American family farms. And this mismatch is leading the major players to go elsewhere — as far as Mexico, Brazil or China.

That means Illinois farmers are at a crossroads. With a projected 20 percent growth rate for organic food sales over the next few years, more growers could profit if they found niches, endured the transition and developed support networks for storage and distribution. If they can’t meet the pressures of mass production, though, local organic

**Where Midwestern  
organic farmers stop  
short, stores such as  
Wal-Mart could step in.**



farmers could miss the opportunity.

At the same time, consumers, while gaining access to cheaper organic food, could lose their ability to support the local organic economy.

So far, Illinois and regional farmers have been slow to cash in, according to Jim Slama, founder and president of Sustain, a Chicago-based nonprofit organization that promotes economic development through environmentally friendly programs. He says consumers don't just want organic, they want local. But that isn't readily available.

Slama's organization spent three years studying regional trends. The group's March report, *Organic Harvest*, documents the need for a more extensive local organic food industry. Less than 5 percent of the organic fruits and vegetables sold in the Chicago area, according to a paper cited in that report, came from the region in 2000. The paper was written by Erik Birkerts for the Prairie Partners Group LLC, a consulting group based in Lake Forest.

While Slama says these numbers have improved, there's still a way to go. His conclusion: The region is not achieving its potential, and Illinois could move to the forefront if it showed some initiative.

Combined with their Midwestern neighbors, Illinois organic farmers make up 15 percent of the national organic market, according to the Natural Foods Merchandiser's *2005 Market Overview*.

"The regional market is \$2 billion," Slama says. "Basically, we're leaving hundreds of millions, if not billions, of local food dollars on the table to be capitalized on by other states or other regions. That to me is a major opportunity lost."

Where Midwestern organic farmers stop short, stores such as Wal-Mart could step in. One industrywide concern is that the superstores could swallow the supply and limit the availability of locally grown organic produce, says Pat Baylor, director of retail sales and marketing for Goodness Greenness, a leading Midwest organic produce buyer that is based in a Chicago neighborhood.

Slama says he's concerned regional farmers won't be able to secure good prices for their produce if megastores edge them out. "One of the reasons organic has been great for farmers is that

[they] have been able to net their cost of production, plus a profit, without subsidies," he says.

That's why his talks with Wal-Mart's vice president of sustainability stick in his mind. "When they've become the world's largest organic food retailer, they've become a major force that has to be reckoned with," Slama says. If Wal-Mart drives prices down, he says, organic farming could become less sustainable for local farmers. It would also seem less viable for farmers who are thinking about converting to organic crops.

Then again, another challenge is to provide organic foods to consumers at reasonable prices. "There's a lot of suppliers in the supply chain," Slama says, "and I think there's got to be a middle ground between farmers getting paid a fair price and prices being unreasonable."

Slama says he won't argue with Wal-Mart for providing a more price-competitive option for middle Americans, particularly if they're working with American producers. Of course, it would be better if the company worked with Illinois farmers, but, he concedes, "One of the biggest problems I find is there are very few organic vegetable and fruit producers to meet the demand."

That's partially because it takes three years for farmers to make the transition to being certified organic by the U.S. Department of Agriculture. That's the amount of time it takes for commercial pesticides to disappear from the soil, says Robert Reese, a representative in the Illinois Department of Agriculture's marketing and promotion office. In addition, livestock farmers have to buy certified, organically produced livestock, and they have to raise them on ground that has had no contact with synthetics.

There are other potential drawbacks to organic farming. "It's a higher risk. It's more labor-intensive because you don't use herbicides and pesticides," Reese says. "It's going to require a lot of manual labor to keep the fields clean. They use some organic fertilizer, but you're not going to get the yields that you get in a commercial operation. There are trade-offs, and that's why it commands a higher dollar."



Currently, about 230 Illinois farmers are certified organic through a U.S. Department of Agriculture grant program that reimburses farmers for up to 75 percent of their certification costs, with a maximum of \$500, according to Reese.

That's not nearly enough farmers to keep up with the demand. "We can't feed Bloomington with the amount of produce that we raise here in this state, let alone attack Chicago," Reese says. "There's a big upswing potential."

Momentum toward organic farming has picked up in the past three years, says Baylor of Goodness Greenness. He says the company buys organic food from about 30 local farms in a five-state region. In addition to wanting to help local farmers, some of the attraction is lower transportation costs.

One way to improve local farmers' chances could be to spell out the region's needs. While some items are in short supply, others go unsold, Baylor says. It may be as simple as telling farmers to grow more pumpkin squash and less spaghetti squash.

Clarkson Grain Co. of Cerro Gordo became a success story by selling proprietary materials, such as a unique blue corn that has as many antioxidants as blueberries, according to chief executive Lynn Clarkson. He says his company individualizes for clients, including big players looking for a specialized company to supply the niche ingredient.

"If it's a mass market, or if it looks like it will turn into a mass market, we don't wish to play on that field," Clarkson says. "Our job is to see that we don't get cut off at the knees, maintain direct contact and use our people and our equipment as efficiently as possible."

The hard work pays off if the farmers ride the learning curve. "Their markets are saying, 'Atta boy, make us some more,'" Clarkson says. "A good organic farmer is netting over twice what his conventional neighbor is netting today. Even at international organic price markets, they could still make more than conventional."

Even if future farmers make the conversion, there's still the logistical challenge of securing a regional network for storage and distribution.

Those two factors have a lot to do with why corporations provide much of the

food we eat, says Michael Mazzocco, a faculty member in the University of Illinois' Food and Agribusiness Management Program and interim director of corporate relations at the university's Urbana-Champaign campus.

"The distribution network is built around efficiency," he says. "Trying to find ways to reduce transportation costs is a huge issue, and you have to do that with volumes."

The cereal and meat aisles in brand-name grocery stores are a good example. Major brand names that have picked up on the consumer demand for organic products include General Mills, which owns Washington-based Cascadian Farm organic cereal. Kellogg owns California-based Kashi cereals, as well as soy products from Morningstar Farms. They're in the same section as Kraft-owned meatless Boca burgers.

And all are particular about securing a steady supply of ingredients. General Mills has exclusive rights to Green Giant corn and peas, and Mazzocco says the company hires farmers to secure an organized channel of supply. Frito-Lay, similarly, won't take just any corn for their Tostitos Tortilla Chips. They hire farmers to ensure the organic blue corn has specific milling characteristics.

The farmers under those contracts differ from the family farmers who grow what they want and sell it directly to customers at local markets or specialty stores. Consider seasoned beekeeper Ellis "Ed" Vanderpool of Arenzville, who sells 3 to 7 tons of raw honey a year only at farmers' markets and the County Market grocery store. He says he's afraid to get into any other store because he might not be able to keep up with the demand. "I have no problem getting rid of my honey," he said on the first official day of the Springfield farmers' market.

A beekeeper for about 50 years, Vanderpool strains the unprocessed honey from 150 beehives stretching more than 20 miles along the Illinois River between Mason and Morgan counties. He uses garlic powder and powdered sugar to fight off the mites. "If that label says 'pure,' that's what it's made of, only what the bees put in there," he said.

Each bottle also has an "Illinois product" sticker on it to indicate his honey houses and stainless steel equip-

ment have passed state inspections, allowing him to sell his products anywhere in Illinois. Vanderpool has put thousands of dollars into improvements, but has stopped short of taking the necessary steps to become USDA certified. "I've had enough of the government in my life."

Such attitudes would need to change for Illinois to fulfill its potential.

Slama says traditional sources of information, such as the farm bureaus and the farm media, have failed. "There needs to be an outreach program to conventional producers to help them understand the opportunity and convert," he says. "The fact is that over the next five to 10 years, the way that farmers are educated about these issues in the region has to change. And this kind of education about organics has to become more mainstream."

The state agriculture department is trying to lower a few of the hurdles. Reese says the state is working with the University of Illinois Extension and others to develop a distribution network to help small producers who may not have enough to fill a truckload.

"We're looking at trying to create a hub and put a truckload together," Reese says. "That's really in its infancy at this point. We see a need, and we know the demand is there, but the funds really aren't there."

Goodness Greenness is part of the effort to help farmers in Illinois, Indiana, Iowa, Michigan, Minnesota and Wisconsin. The company is developing a private label brand of local organic food. All of those items will have a seal that says FamilyFarmed.org, a program founded by Slama to help regional organic farmers with marketing, networking and distribution.

While Slama says organic has become hip, it's sustained itself beyond fad. Yet, it could still tilt the other way.

"To me, it's heading towards a tipping point," Slama says. "Everybody wants it. There's not enough of it, which makes it even hotter on some level. And I think it's going to continue to grow, and my goal is now to get Illinois producers to step up and start filling the supply chain with local products so we don't have to import it from California or China or wherever else." ■

# Body of knowledge

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Citizens could find out what contaminants they have been exposed to. But states face challenges in connecting environmental hazards to public health

by Jasmine Washington

Tests on a single strand of human hair can reveal a laundry list of toxic contaminants — but little information on how worried we should be about it.

When the Pew Environmental Health Commission at the Johns Hopkins School of Hygiene and Public Health published its 2000 report, there still were no tests for the effects on human health of two-thirds of the chemicals produced in the United States. The commission did conclude, however, that many health problems could be prevented if we knew more about the complex interactions among social, biological and environmental factors. It suggested creating a system to collect and analyze data on the relationship between diseases and environmental exposure.

Nationwide, public health agencies are looking at what has come to be called biomonitoring as one facet of preventive medicine. The technique would measure the levels of manufactured and natural chemicals in human tissue and fluids, a step beyond current government efforts to gather environmental health data.

This could make fiscal sense to states seeking ways to contain health care costs. Seven out of 10 deaths are the result of chronic diseases, including asthma, cancer, diabetes, obesity and stroke. And treating such chronic illnesses costs the national public health care system \$7 billion a year, according to the annual report of the National Association of



Chronic Disease Directors. Further, the Pew Environmental Health Commission report estimated that, by 2020, chronic diseases will afflict 134 million people and cost \$1 trillion.

More researchers are finding that some chronic diseases can be stimulated by environmental factors. Research published in the *New England Journal of Medicine* found that genetics is not the only factor in incidences of cancer. Outside sources, such as secondhand smoke, toxic chemicals and dietary habits, can be stimulants for the often-deadly disease. Meanwhile, a study conducted by the Harvard School of Public Health found that high levels of air pollution triggered cardiovascular problems in diabetic adults.

Through a biomonitoring program,

researchers could study the chemical levels in groups of people by looking at such factors as age, ethnicity and residence. Most likely, researchers would sample blood, urine or breast milk. Sometimes the air inside the body and tissues from bone, hair and nails can be tested. The tests can reveal traces of contaminants, such as dioxin, lead and pesticides, which have been linked to cancer.

Yet political and scientific support for biomonitoring may not be as clear-cut as it might seem to be. The U.S. Centers for Disease Control and Prevention reported last summer that biomonitoring measurements provide the most accurate data because they evaluate levels of the contaminants from all possible environmental sources. But the same report said, "The measurement of an environmental chemical in a person's blood or urine does not by itself mean the chemical causes disease."

Still, advocates say the presence of chemicals is a good enough reason for people to know what's in their bodies. Jack Darin, the director of the Illinois Chapter of the Sierra Club, says making the levels of toxins in our bodies public knowledge would enable individuals to make better health care decisions and lawmakers to enact better policy.

Darin's group participated in a mercury hair-sampling study with the Environmental Quality Institute at the University of North Carolina-Asheville



in October and September. The results of tests on 104 Chicago-area residents showed that 22 percent exceeded federal limits for the heavy metal.

"Monitoring our air, water and soil for pollution is a critical responsibility, but monitoring our own bodies would give us very useful information to better protect the public," Darin says.

Since 1999, a national biomonitoring program launched by the federal CDC has gathered data on environmental exposure. While the technology was still developing, most states didn't have the capability of performing biomonitoring procedures. That led the CDC's Environmental Health Laboratory to dole out \$10 million in grants to state and regional public health labs so they could plan how they would develop their own facilities. A few years later, the agency fully funded only three programs in New Hampshire, New York and the six-state Rocky Mountain Biomonitoring Consortium.

Nevertheless, some state officials are considering ways to expand their current environmental health programs to include biomonitoring. Adam Schafer, executive director with the National Caucus of Environmental Legislators, says biomonitoring programs are one of the emerging environmental policy trends for states.

"The role of the state can be very active in funding studies, appropriating and deciding how the program is going to be done. Although money can be a big issue, the argument here is states should be doing something in order to make sure it's acceptable for the public health of that particular community," Schafer says.

Even at the federal level, lawmakers are pushing states to be more accountable for the environment's influence on public health. Last year, U.S. Sen. Barack Obama of Illinois and U.S. Sen. Hillary Rodham Clinton of New York co-sponsored legislation to create a national advisory committee on environmental health that, in part, would assess each state's system for monitoring environmental contaminants.

Most states, including Illinois, opted for the more cost-effective environmental public health tracking program, which collects statewide statistics on environmental hazards and their possible

effects. The Illinois Department of Public Health matches environmental samples from the Illinois Environmental Protection Agency with health data, but does not test for specific chemicals in individuals. However, a recent study conducted in DuPage County by the public health department examined the relationship between cancer and two contaminants found in private wells.

That agency sends the data to the feds. Department spokesperson Melaney Arnold says her agency also is drafting a proposal seeking additional federal funds. The original four-year grant was \$2.8 million. For the next cycle, which is five years, the agency is asking for \$5 million.

Though Illinois doesn't yet have a state biomonitoring program, the debate is under way in other states. Some critics denounce it as another example of wasteful government spending. However, supporters argue the cost of health care is greater than the cost of biomonitoring.

California's proposed biomonitoring measure aims to save the state money. It spent \$126 billion on health care in 2006 alone, according to the federal Centers for Medicare and Medicaid Services. A California state Senate analysis estimates a \$7.4 million price tag on the program in the first year and \$6.5 million thereafter. And the CDC offered a \$1.7 million grant to help start the program when the proposal was up for legislative consideration last year.

Though the controversial proposal was approved by the legislature, it was vetoed by the state's Republican governor, Arnold Schwarzenegger. It was revived a fourth time during this spring's legislative session.

Grethen Lee, the state program and policy coordinator for the Breast Cancer Fund, expects the measure to be approved because of support from powerful Senate President Pro Tem Don Perata, an Oakland Democrat. The San Francisco-based group Lee represents advocates for the elimination of environmental and preventable causes of breast cancer and supports the legislation.

According to Lee, the major opponents of the biomonitoring proposal are the chemical, manufacturing and business industries that believe people shouldn't

know what chemicals are present in their bodies.

"A state biomonitoring program is about empowerment, not frightening people," Lee says. "We are living in a toxic soup, and we have no idea what chemicals are doing to us. [People] are a part of a vast toxic experiment that we never gave our consent to and [it] is going on without our knowledge."

If they have support from the public and state officials, states still have to develop and implement their programs. Dr. Charles McKay, a member of Connecticut's Environmental Public Health Consortium, says communication between state agencies is an essential component of that process because they have to interact in order to share information.

He says establishing a consistent standard for data is one of the major benefits of starting a state biomonitoring initiative. McKay, a toxicologist with the Poison Control Center at the University of Connecticut Health Center, says that over the years state agencies had accumulated information on environmental health, but, without a uniform purpose, the information was useless.

"[A biomonitoring program] would have people talking together and sharing information in order to help people," he says. "You'd think it would be a no-brainer."

In Illinois, Highland Democratic Rep. Karen May agrees such a program should be a no-brainer, but she adds that getting environmental legislation approved is sometimes a battle.

May has her environmental bona fides. For two years, she fought for a measure to regulate the disposal of mercury switches in cars; it was signed by Gov. Rod Blagojevich in April. As chair of the House Environmental Health Committee, she also sponsored a measure to create a children's environmental health office, but that office has yet to receive funding.

"I don't think Illinois is quite ready for biomonitoring," she says. "We're not as progressive as on the East or West Coast, but we are still leaders. [Biomonitoring] would be the right thing to do and would be cost-effective in the long-term, but sometimes you have to weed out the issues [to] what you think is achievable." □

# ACT LOCAL

*Our future is in our hands. If we do little or nothing to reduce the pollution associated with global warming, our children and grandchildren will experience a radically different world*

by Donald J. Wuebbles and Kevin Knobloch

The climate is changing; the growing evidence of global warming is all around us.

Right here in the Midwest, extreme heat waves occur more frequently, creating new health challenges for people, plants and animals. Heavy rainstorms are more common, causing problems for farmers and homeowners, especially in winter and spring. Winters are getting shorter, reducing ice cover on lakes and affecting tourism revenue.

Leading Midwest university scientists, who have examined these and other potential consequences for the character, economy and environment of Illinois and other Midwest states, issued their findings in a report titled *Confronting Climate Change in the Great Lakes Region*.

Yet additional analyses prepared by energy and environmental experts at the Union of Concerned Scientists offer practical actions citizens and policymakers can take now to reduce the vulnerability of Illinois' precious ecosystems and safeguard the state's economy in the face of this change. Indeed, the actions of every Illinoisan can profoundly affect the state's health and well-being.

Illinois is known for its hot and humid summers. And, according to the most recent climate analyses by University of Illinois researchers, this heat and humidity will continue to increase. Assuming

policymakers take no significant actions to reduce heat-trapping emissions, by century's end, Illinois temperatures are projected to rise between 9 degrees and 18 degrees in summer and between 7 degrees and 13 degrees in winter. This remarkable warming is roughly the same as the warming that occurred over the more than 10,000 years since the last Ice Age in our region. These changes will dramatically affect how the climate feels. By 2100, an Illinois summer will generally resemble that of east Texas.

Rising temperature will be accompanied by changes in precipitation patterns. The frequency of heavy rainstorms in Illinois likely will continue to increase and could be 50 percent to 150 percent higher than today. More storms can mean more flooding of roadways, basements and farm fields. Sewer systems in most Illinois towns will be ill-equipped to handle the downpours, increasing the risks of waterborne infectious diseases. More beaches will be closed due to the potential spread of *E. coli* and parasitic organisms.

Higher temperatures also will increase the likelihood and intensity of future droughts because rainfall cannot compensate for the drying effects of a warmer climate, especially in the summer. Illinois depends heavily on rainfall, groundwater and freshwater from Lake Michigan and other inland lakes for

agriculture, drinking and industrial uses. Reduced summer water levels are likely to diminish the recharge of groundwater, dry up small streams and reduce wetlands, resulting in poorer water quality and less habitat for wildlife.

The impact of these changes on agriculture — one of Illinois' top industries — would be far-reaching. Although agriculture likely will benefit in some ways from a warmer climate and increased carbon dioxide, research from the University of Illinois suggests the negative consequences likely will overshadow the potential benefits.

A generally warmer climate will undoubtedly lengthen the growing season; however, increased incidences of severe storms and floods during the planting season, as well as drought and low soil moisture in the summer, are likely to depress yields. The combination of flooding and high heat is especially lethal to corn and soybeans. Elevated carbon dioxide levels may help fertilize those crops, but higher CO<sub>2</sub> levels will change the quality of plant tissues, making them more susceptible to pests.

Hotter temperatures likely will increase ozone, which is particularly damaging to soybeans; yields already have been reduced approximately 25 percent by such damage.

Heavy downpours, floods, heat waves



and droughts will burden emergency management, public works and health services, and exact a financial toll on governments, businesses and homeowners.

Even hunters and fishermen will feel the impact. Minnesota, for example, already is experiencing declining walleye populations due to higher water temperatures in inland lakes. Changes in recreational fishing, hunting and wildlife watching throughout the Great Lakes states may occur as the distribution of species shifts across the region. Conservative estimates project a 19 percent to 39 percent decline in the duck population by the 2030s in response to the loss of breeding habitats and the aquatic plants on which ducks feed.

To put it plainly, global warming presents a real threat to our health, safety and welfare. The negative effects on the health of our lakes and streams, the profitability of agriculture and industry, and our personal health and recreation already are being felt and are likely to increase in severity.

But just as human activity has driven this rapid climate change, human action can help limit the most severe consequences of global warming. We have the technologies we need to do the job; what's required is the political — and public — will to make full use of them.

In the absence of federal leadership, states are developing initiatives to reduce global warming emissions, primarily by increasing energy efficiency and stepping up the development of renewable energy sources. Though state and regional action cannot substitute for national policy, it does provide a foundation.

In 2001, power plants and vehicles were responsible for two-thirds of Illinois' carbon dioxide emissions, the primary contributor to global warming. Any serious effort to tackle the problem must target emissions from these two sectors, while reducing emissions from industry, buildings and agriculture.

Power plants account for 37 percent of Illinois' current CO<sub>2</sub> emissions, due in large part to the state's heavy reliance on coal-fired electricity. Energy efficiency programs have multiple benefits: reducing pollution from aging facilities, creating jobs in retrofitting buildings and

manufacturing efficient technologies, and reducing electric bills.

Producing electricity from renewable sources such as wind, solar and biomass similarly would reduce emissions and create economic opportunities. For instance, University of Illinois research on bioenergy — burning switchgrass and other grasses to generate power — is showing that there are viable economic benefits in alternatives to fossil fuels.

While Illinois has established voluntary goals for efficient and renewable energy, a mandatory standard with strong enforcement provisions would be more effective. To date, 20 states, including Iowa, Minnesota and Wisconsin, have established mandatory renewable electricity standards.

As part of its plan to implement the federal Clean Air Act, Illinois is considering allocating levels of nitrogen oxide in connection with efficiency and renewable energy projects. While aimed at reducing smog-forming emissions, such incentives also would reduce global warming emissions.

*In the United States*, coal power plants produce more emissions associated with global warming than all cars, SUVs, trucks, buses, boats, trains and airplanes combined. There are about a dozen new coal-fired power plants planned for Illinois. In addition, retrofits to the existing fleet of fossil fuel plants are planned that will significantly extend their operating lives for years to come. Most of these plants would use conventional technology that will greatly increase our state's contribution to global warming.

Given the critical need to reduce carbon dioxide, we must deploy all available, cost-effective, efficient and renewable energy options before making new investments in coal. Any new coal plants should use advanced technology to reduce and clean emissions. At the same time, any continuing risks associated with coal — including mercury emissions — should be factored into energy planning and pricing decisions.

The transportation sector is responsible for nearly 30 percent of Illinois' current CO<sub>2</sub> emissions. Increasing auto fuel efficiency, introducing hybrid and fuel cell

cars, developing low-carbon fuels and reducing the number of miles Illinoisans drive can yield significant benefits for the environment — and for consumers.

Illinois already is a leader in producing ethanol from corn and biodiesel from soy-based fuels. The state should take a similar leadership role in developing the next generation of ethanol plants that would rely on cleaner cellulosic-based fuels such as switchgrass and crop residues. This would reduce emissions further.

Beyond that, Illinois should join 10 other states in adopting California's requirement that, beginning in 2009, new cars must substantially reduce carbon dioxide emissions.

Meanwhile, Illinois is joining several other Midwest states in developing a voluntary registry to identify and track heat-trapping gas emissions within the region. This registry will be compatible with existing registries in California and the Northeastern states. Businesses have found that by identifying, tracking and reducing heat-trapping gas emissions, they can cut pollution and save money.

While a voluntary registry is an important first step, mandatory limits on pollution, combined with market-based emissions trading, will be necessary to achieve significant long-term reductions. Many large corporations such as Exelon, BP, General Electric and Wal-Mart, recognizing the threat of global warming and the likelihood of mandatory reductions, already are taking voluntary actions to reduce emissions.

Our future is in our hands.

If we do little or nothing to reduce the pollution associated with global warming, our children and grandchildren will experience a radically different world. But if Illinois joins other states and countries that are acting to promote clean technology solutions, we can reduce the impact of climate change while creating jobs and lowering energy bills. It's clear which path we should take. □

*Donald J. Wuebbles is a professor in the School of Earth, Society and Environment at the University of Illinois in Urbana-Champaign.*

*Kevin Knobloch is president of the Union of Concerned Scientists.*

## History on the Hill

U.S. House Speaker **J. Dennis Hastert**, an Illinoisan, made history this spring. He's now the longest-serving Republican to preside over that chamber.

Hastert, who lives in Plano, represents Illinois' 14th congressional district. He has served as speaker since January 1999, when he replaced Newt Gingrich of Georgia.



U.S. House Speaker  
J. Dennis Hastert

"Hastert can't rest on star power," reporter Lynn Sweet wrote in *Illinois Issues* (see September 2002). "He's big and beefy — think John Goodman or John Madden — but most people couldn't pick Hastert — who is third in succession to the White House — out of a lineup."

Sweet, who covers Washington, D.C., for the *Chicago Sun-Times*, quoted GOP pollster Frank Luntz in her profile for the magazine: "He is not well-known. He has never been well-known, and maybe that is why people trust him. He is content to play behind the scenes."

Hastert's tenure surpasses another Illinois Republican, Joseph Cannon, who was House speaker from December 1903 to March 1911.

## Race for Tenhouse seat

A former Quincy mayor and a Mount Sterling attorney will contend for the 93rd District seat in the Illinois House.

The Adams County Republican Central Committee appointed **Jil Tracy** of Mount Sterling to fill the remainder of Liberty Republican **Art Tenhouse's** term. In addition to appearing on the November ballot, she will fill the seat during the General Assembly's fall veto session that month. An attorney, Tracy is a commissioner on the Mount Sterling Park District.

Her Democratic opponent will be another attorney, former Quincy Mayor **Charles Scholz**. He was selected by the Democratic Central Committee from the seven counties in the House district.

The seat became available when Tenhouse resigned after 17 years in the House.

## O BITS

### Katherine Dunham

The famed dancer, choreographer, teacher and author died May 21. She was 96. She has called East St. Louis one of her "spiritual homes." Others include Dakar, Senegal and Port au Prince, Haiti, according to Eugene Redmond, her longtime friend and fellow faculty member at Southern Illinois University Edwardsville.

"She was a source of pride for black people, but she was also known across the cultures, across the world, across the social strata," he says. "She made history for women."

The daughter of multiracial parents, Dunham had an astute awareness of diversity and prejudice from an early age, Redmond says. She also fought physical limitations, coping with arthritis since childhood. Yet she led a life of firsts.

Born in Chicago in 1909 and raised in Glen Ellyn and Joliet, she later earned her bachelor's, master's and doctoral degrees in anthropology. She established a professional performing company in Chicago in 1931.

Under a Rosenwald Travel Fellowship, she left the country to research anthropology and dance in the West Indies. She returned to the United States, performed on Broadway and toured the country with her dance company. At the same time, she nurtured her family, fought for social justice and perfected the Dunham Technique. Her world-renowned dance methodology combined culture, ethnicity and behavior of people she studied, including European ballet, Japanese Kabuki theater and Caribbean dance.

"She made anthropology more of a living science," Redmond says.

Dance, for her, also served as a voice for social activism. She choreographed a ballet, "Southland," in response to racial lynchings. In her 80s, she fasted for 47 days on behalf of Haitian boaters.

"She used both the dance and her stature — her social stature, her artistic stature, her academic stature — to bring attention to everything from segregation to sexism," Redmond says. "She displayed the best attributes of people of color, particularly African Americans, at a time when virtually everything that came out of the mainstream media articulated black people as bumbling idiots."

Dunham returned to Illinois in 1967, when she met state Rep. Wyvetter Younge, an East St. Louis Democrat. Their 40-year friendship started when Younge stopped to help Dunham with a flat tire.

Younge then worked with Dunham as she created a "new civilization." Dunham started a performing arts training center and dance anthropology program at SIU Edwardsville. Then she opened a museum of African and South American art. In 1969, she created another namesake, the Katherine Dunham Centers for the Arts and Humanities, to enable the East St. Louis community to celebrate diversity and multidisciplinary arts.

"She believed that people should adopt an ethic of excellence in the carrying out of their life's mission," says Younge, who also attended classes in the Dunham Technique. "She believed that movement is life and that there is a universality of existence in which we should understand other people's cultures."

### George Dunne

The Cook County powerhouse and powerbroker for the Chicago Democratic machine died May 28. He was 93.

He served more than four decades as 42nd Ward committeeman on Chicago's North Side and more than two decades as Cook County Board president.

His years of public service began when he was selected to fill a seat in the Illinois House in 1955. He became House majority leader in 1961. Eight years later, he left to become Cook County Board president. Dunne's term lasted until 1990, when he was reportedly involved in a sex scandal.

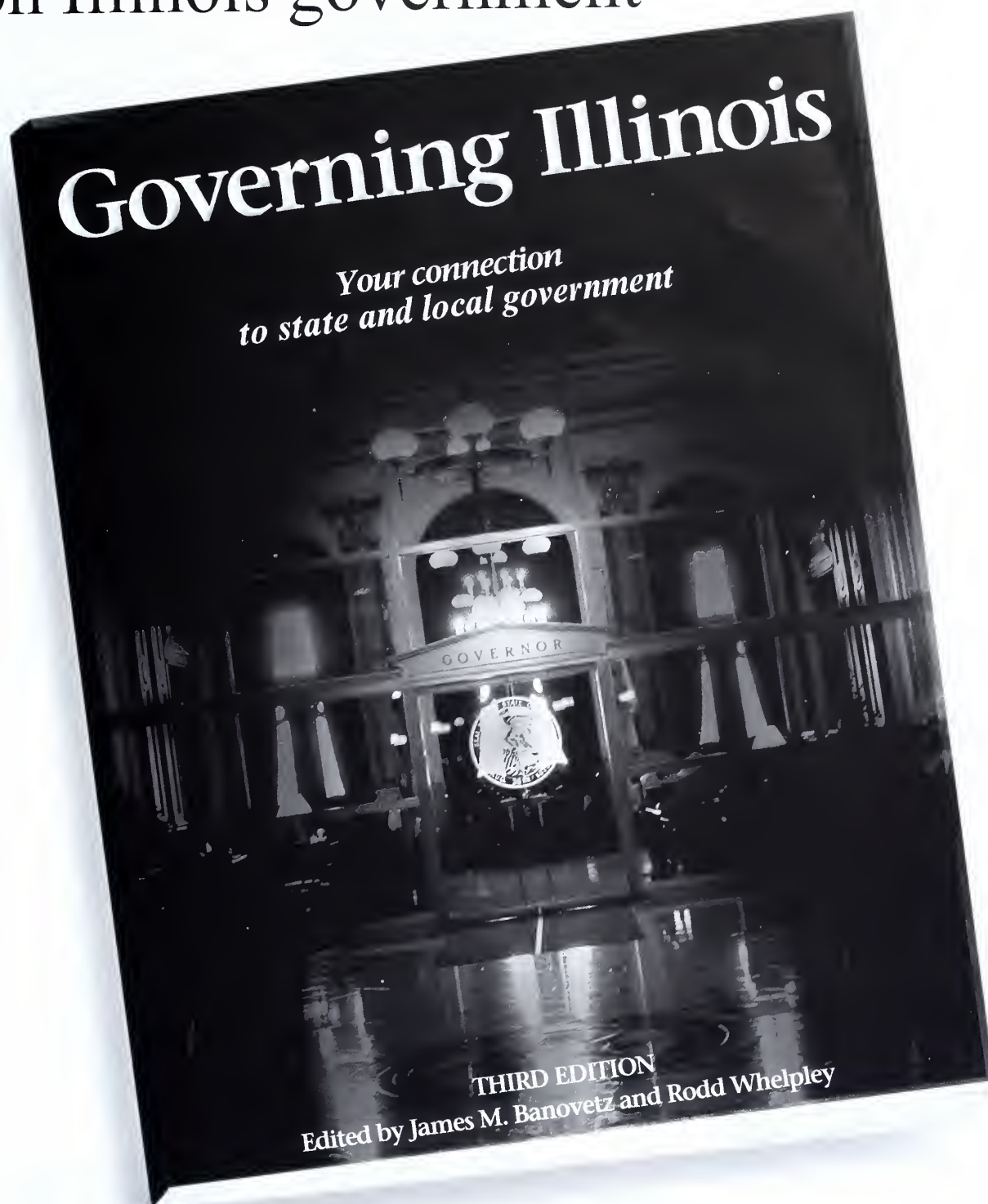
Dunne continued serving as Cook County Democratic Party chairman, a post he assumed when Chicago Mayor Richard J. Daley died in 1976.

He remained 42nd Ward committeeman until age 90.

For updated news see the *Illinois Issues* Web site at <http://illinoisissues.uis.edu>



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## LETTERS

### Finding state dollars for frontline positions is a matter of priorities

Bethany Carson's assertion that it's "crystal clear that the state's budget has no extra money to rehire thousands of workers" cannot go unchallenged.

In a budget of more than \$55 billion, finding \$34 million to restore essential frontline positions needed to address the stark decline in critical state services came down to a question of priorities. The governor and legislative leaders found over \$200 million to fund their pet projects (widely cited as "pork"), many of which are of dubious value to the wider public. They simply decided that improving care for aged and ailing veterans, maintaining safety and security in our prisons, strengthening child protection, preserving our parks and other natural resources, and investing in other public services were of lesser importance.

It's crystal clear why they would like taxpayers to believe that there was no

money to adequately fund these services. What's less clear is why Carson would perpetuate the myth.

*Henry Bayer  
Executive Director  
AFSCME Council 31*

### Write us

Your comments are welcome. Please keep them brief (250 words). We reserve the right to excerpt them.



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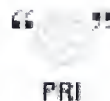
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Charles N. Wheeler III



## Illinois politicians weigh benefits of unloading the lottery and the tollway

by Charles N. Wheeler III

**L**ike a high-rolling homeowner pawning the family silver to prop up an extravagant lifestyle, Gov. Rod Blagojevich wants to sell or lease the state lottery to bring in a quick \$10 billion or so for education.

State Sen. Jeffrey Schoenberg, meanwhile, is pushing privatization of the state's 274-mile toll road network to garner upwards of \$15 billion for transportation projects and pension funding.

Both plans hold out an almost irresistible lure for politicians in an election year — a promise of lots of cash in a hurry, virtually pain-free in the short term.

The governor's lottery proposal calls for pumping an additional \$6 billion into education funding over the next four years, two-thirds of it from proceeds of the lottery deal. The other \$6 billion would be invested to generate \$650 million a year for schools through fiscal year 2025. The new funding would be targeted to a host of worthwhile causes, such as programs helping failing students and schools, expanded preschool slots and smaller class sizes, special education needs, and new classrooms and textbooks.

Schoenberg, an Evanston Democrat, argues that selling or leasing the tollway would provide a windfall for new roads, bridges and mass transit, as well as reduce the state's near \$40 billion unfunded pension liability.

*Neither plan, though, is without the potential for dire long-term consequences for Illinois citizens, a point recognized most notably by House Speaker Michael Madigan.*

Neither plan, though, is without the potential for dire long-term consequences for Illinois citizens, a point recognized most notably by House Speaker Michael Madigan. Returning to the fiscal prudence he abandoned last year — when he agreed to underfund pensions by \$2.3 billion — the speaker now is asking pointed questions he says need to be answered before either proposal moves ahead.

Madigan's concerns, presumably shared by other thoughtful Illinoisans, emerged in letters he sent to Blagojevich and to Schoenberg and Hoffman Estates Republican Rep. Terry Parke, the chairs of the Commission on Government Forecasting and Accountability. The panel has hired an investment adviser, Credit Suisse, to analyze the potential value of a tollway lease.

Perhaps the most glaring shortcoming

in the governor's lottery scheme is its built-in drop-off in school funding after the initial windfall is exhausted in four years. Coming up with \$2 billion or so to continue the beefed-up programs in Year Five would require lawmakers to hike taxes, cut other spending, find another asset to peddle or dream up an even wilder scam.

"We must consider our obligations not only to those who need help today, but also that we keep the state on a sound financial footing so that we can meet our responsibility to those who will need help tomorrow," Madigan told Blagojevich.

Besides the five-year vanishing act, the governor's proposal fails to address the major cause of the notorious inequities in school funding in Illinois — the state's heavy reliance on local property taxes. And downstate legislators worry that "failing students and schools" may be code for Chicago, with their districts seeing little new money. Such fears were heightened because the lottery proposal surfaced just in time to convince state Sen. James Meeks, a Chicago Independent and chair of the Legislative Black Caucus, to drop a third-party bid for governor that could have torpedoed Blagojevich.

Besides funding questions, the lottery plan raises other issues. It's a safe bet that whoever pays \$10 billion for rights to the lottery will seek to maximize profits on the deal. Could that mean

more sales agents, stepped-up advertising in low-income communities, online games, keno parlors? If legislators block such aggressive marketing tactics, will someone really pony up \$10 billion?

Similar uncertainty surrounds the tollway proposal. For suburban drivers, who account for the most traffic on the system, the biggest question is how soon and how high a private operator will raise tolls. Indeed, Schoenberg wants to set aside some of the lease proceeds to offset future toll hikes for regular users.

But higher tolls are not the only issue. Another way to improve the bottom line would be to cut costs — which could mean lower wages and fewer benefits for employees of a private operator than are now paid to unionized tollway workers — or reduced repair and maintenance outlays.

Suburban lawmakers argue that any windfall from leasing a network built largely through decades of tolls paid by their constituents should be used to ease traffic congestion and improve mass transit in their region. But a bidder

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***Cashing in one's assets  
to live beyond one's  
means is a recipe  
for financial disaster.***

for the tollway lease might seek a “no-compete” clause, prohibiting any new or improved roads that might offer drivers alternate routes to the privatized system.

The legislature can dictate the terms of a lease. For example, it could require the operator to follow state purchasing rules and to pay union wages or to hold off on toll increases. The more restrictions imposed on the lease, however, the less lucrative the deal is likely to be for the state.

“Any attempt to assign a value

must be preceded by a serious analysis of the conditions that will attach to the lease,” Madigan wrote in posing 17 “fundamental” questions for Credit Suisse to address.

While Madigan has been noncommittal on the plans, the Center for Tax and Budget Accountability, a bipartisan research and advocacy think tank, minces no words.

“If in fact the targeted education programs represent wise and needed investments, then why sell a state asset today and create the need to raise taxes tomorrow,” wrote center analysts in a briefing paper. “If the investment is needed today, Illinois should take the fiscally responsible strategy of raising the tax revenue necessary to fund these programs today.”

While aimed at the lottery deal, the broader point is well-taken: Cashing in one's assets to live beyond one's means is a recipe for financial disaster. □

*Charles N. Wheeler III is director of the Public Affairs Reporting program at the University of Illinois at Springfield.*

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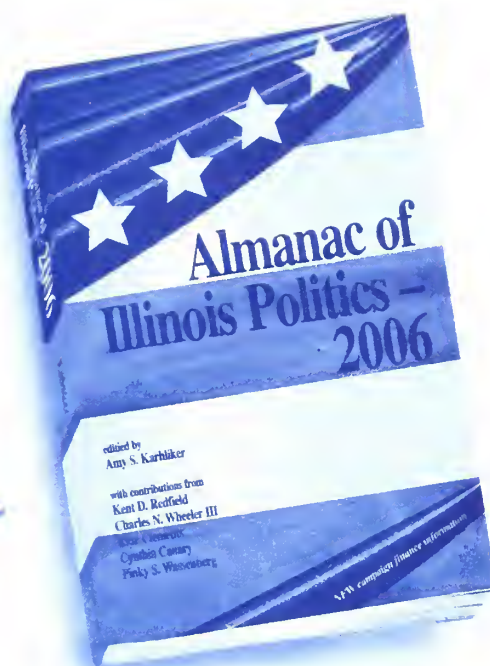
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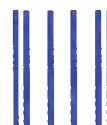
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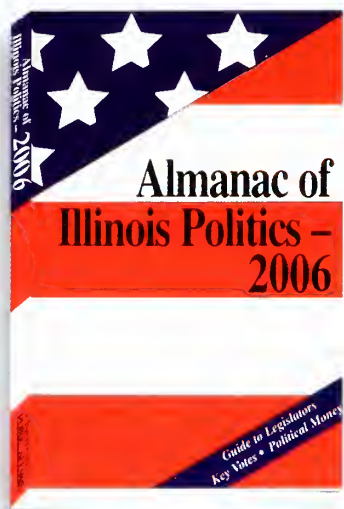
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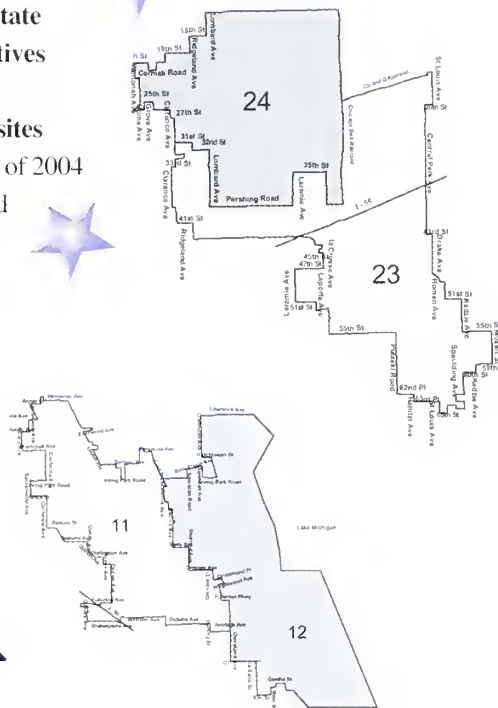
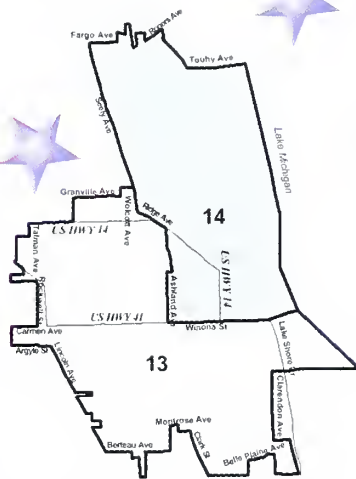
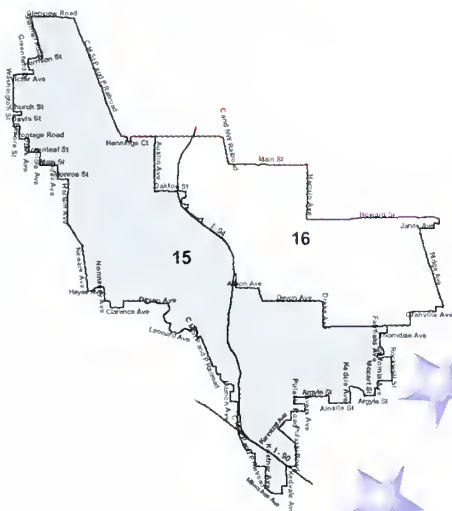
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